

THE ROLE OF THE MEDIA IN SOUTH AFRICAN CONSTRUCTION HEALTH AND SAFETY (H&S)

*John Smallwood and Danie Venter, University of Port Elizabeth, Port Elizabeth,
South Africa*

Introduction

Mass media are pervasive in modern society and are essential to disseminate information, facilitate expression, and to determine happenings beyond the immediate environment (Vivian, 1997).

The mass media fall into three categories based on the technology by which they are produced – print, electronic and photographic. The primary print media are books, magazines and newspapers. The primary electronic media are television, major radio and sound recordings, and the web. The one photographic medium is movies (Vivian, 1997).

A further issue is that of 'hot' versus 'cool'. According to theorist McLuhan, books, magazines and newspapers are 'hot' media because they require a high degree of thinking to use. This contention has been reinforced by research, which found that people remember much more from reading a magazine or newspaper, than from watching television or listening to the radio (Vivian, 1997).

Given the scope of the mass media, this paper focuses on the role of the print media in the form of magazines, and then primarily those which are construction, and to a lesser extent, those which are H&S related. To this end a study was initiated in South Africa to determine:

- the role of the media;
- the need for the media to contribute;
- the influence and impact of the media, and
- perceptions of editors.

The status quo in terms of construction H&S

Accident statistics and the possible cost of accidents (COA) in South Africa, amplify

the need for the media to contribute to construction H&S.

According to statistics provided by the Compensation Commissioner (CC) (2000), in 1995, the year for which the latest H&S statistics are available, every working day in construction, approximately: 1.03 workers were killed; 4.45 workers were permanently disabled; 39.63 workers were temporarily disabled, and 77.49 workers received medical aid from a medical practitioner.

The disabling injury incidence rate (DIIR) of 2.03 in 1995, means that 2.03 workers per 100 incurred disabling injuries (DIs). The construction industry has the fifth highest DIIR, and the fourth highest permanent DIIR, out of twenty three industries.

The severity rate (SR) which is relative to 1000 hours worked, was 2.77 in 1995. Given that the average worker works 2000 hours per year, when the SR is multiplied by two, the modified SR of 5.54 means that 5.54 days were lost per worker in 1995.

The total of 236 fatalities in 1995 results in a fatality rate of 59.5/100 000 workers. This fatality rate does not compare favourably with those of selected international countries or states for the year 1992: Germany (14.0); Japan (19.0); New South Wales (11.0); Ontario (7.4); Sweden (6.0); The Netherlands (3.3), and the USA (18.6) (Center to Project Workers' Rights, 1995).

Inadequate or poor H&S results in injuries and fatalities and disease. Although contractors can obtain insurance cover for the cost of injuries, fatalities and disease in the form of workers' compensation insurance, the insurance only covers the direct COA, such as medical care, and

lost wages in excess of three days. However, the indirect COA cannot be insured against. The indirect COA includes, inter alia: reduced productivity for both the injured worker and the crew; clean-up costs; replacement costs; cost of overtime; administrative costs; costs resulting from delays; costs related to rescheduling, and wages paid while the injured is idle (Levitt & Samelson, 1993).

Research conducted by the University of Washington (Hinze, 1992) determined the indirect costs (excluding claims and material damage costs) to be more than 1.67 times the direct costs. However, for minor injury cases (direct costs less than US\$50), the indirect COA was determined to be more than 5 times the direct COA. According to Grossman (1991), a study by the Construction Industry Institute Safety Task Force in the USA, concluded that the indirect COA is 20 times the direct COA.

According to The Business Roundtable (1995), research conducted in the USA determined the direct and indirect COA to be approximately 6.5% of the value of completed construction. Anderson (1997) cites findings in the UK, which estimate the direct and indirect COA to be 8.5% of the tender price. Regardless of the actual percentage, the COA constitutes a substantial percentage of construction costs.

Importance of the media

Mass media are a source of information, the heart of the informing function being in messages called news. Advertising is also part of the mass media's information function. Mass media also persuades people, usually through editorials and commentaries. However, advertising is the media message designed to persuade people. Public relations (PR) also seeks to persuade, but is subtler, as it is not intended to induce immediate action (Vivian, 1997).

Magazines can contain news, editorials, commentaries, advertising, and even advertorial, which effectively combines advertising and PR.

Magazines

There are two categories of magazines, consumer magazines which are generally available on newsracks, and non-newsrack magazines which are either sponsored magazines or trade magazines/journals. Sponsored magazines are primarily directed towards the promotion of an association or society, such as National Geographic, and growth in membership. Every profession or trade has at least one magazine for keeping related people abreast of developments. Similar to consumer magazines, trade magazines rely mostly on advertising for income, whereas sponsored magazines rely on both advertising and self funding (Vivian, 1997).

Magazines as a channel of influence

Wilde (1994) maintains that society has become more reliant on the mass media as channels for influencing attitudes and behaviour. Television, radio, newspapers, periodicals, posters and other message carriers are being used in efforts to distribute knowledge, to educate, to teach skills, to shape attitudes and to propagate or discourage various habits.

According to Vivian (1997), magazines contribute to the creation of a national culture and promote literacy. Magazines are much less expensive than books and are affordable for most people. Magazines were the first advertising medium in the USA and contributed to the transformation of the USA from an agricultural and cottage industry to a modern economy.

Magazines have led other media in terms of innovations in journalism, advertising and circulation through investigative reporting, in-depth personality profiles and photo-journalism. Investigative reporting entails, inter alia, explorations of abusive institutions or organisations in society. In-depth personality profiles usually entail a highly structured 'question –and-answer' interview, whereas photojournalism uses

visuals to communicate messages (Vivian, 1997).

According to Kotelchuck (1989), a paper authored by Cooke and published in the British Medical Journal in 1924, linked asbestos exposure to disease. Subsequent to 1924, while reviewing hundreds and thousands of documents “in preparation for his book ‘Asbestos : Medical and Legal Aspects’, Castleman unearthed the cover-up by top US corporations in the asbestos industry and revealed the “smoking gun of corporate irresponsibility” (Kotelchuck, 1989). In effect, a corporate policy was established to cover up the hazards of asbestos, which decision shaped and distorted scientific research and public policy relative thereto. Selikoff maintains the aforementioned resulted in the needless loss of tens of thousands of lives over several decades, the expected loss of thousands more, as well as profound human suffering (Kotelchuck, 1989).

The media can also indirectly act as a channel of influence, as if an injury is particularly severe or dramatic, it attracts media attention, which in turn will undoubtedly attract the attention of regulatory personnel (Hinze, 1997).

However, the Civil Engineering and Building Contractor (1999) says that even though it has been said that the media has a social obligation to promote H&S in construction, the media can only do so if the industry itself sets out to promote H&S on a much wider basis.

The aforementioned clearly indicate the role and potential role of industry magazines, journals and other print media in H&S, particularly with respect to communicating research findings and investigative journalism.

Criticism of trade magazines

Vivian (1997) says many trade magazines are recognised for honest, hard-hitting reporting of the industries they cover. However, he maintains that some trade magazines are ‘loaded with puffery

exalting their advertisers and industries’ and persist in pandering to their trades, professions and industries rather than approaching their subjects with journalistic truth-seeking and truth-telling. He also cites the American Textile Reporter’s dismissal of the hazard of textile workers contracting brown lung disease by inhaling cotton dust, as ‘a thing brought up by venal doctors’ at the time when 100 000 US textiles workers were afflicted with brown lung.

Impact of the media

According to Wilde (1994) accident reports in the daily press are among the most frequently read material of all newspaper content. However, invariably the reports do not communicate to readers how they themselves can avoid accidents. Wilde (1994) further says that numerous studies have demonstrated that well designed mass media messages for H&S can have a considerable influence on the general public’s knowledge, attitudes and observable behaviours.

Research

Given the findings of literature, a descriptive survey was conducted among editors of construction industry and H&S magazines/journals, the objectives being to determine:

- the level of knowledge and awareness of editors with respect to H&S;
- perceptions with respect to H&S performance in the construction industry;
- the current and potential contribution and role of the written media, and
- perceptions with respect to the potential of various stakeholders to contribute to improving H&S.

18 Editors responded to the national postal survey, which represents a response rate of 64.3%.

‘Construction magazine’ (66.7%) predominated among the categories of publications represented by editors (Table1).

Table 1: Categories of magazines represented by respondents

Category	Response (%)
Construction magazine	66.7
'In-house' construction magazine	11.1
Health and Safety magazine	16.7
Construction paper	0.0
Construction journal	5.5
Total	100.0

The mean circulation of publications was 5,090, the predominating circulation category being '>2,000≤5,000 (50%)', followed by '>5,000≤10,000' (38.9%).

47% of editors had one qualification, 41.2% had two, and only 5.9% did not have a qualification. Only 11.1% of editors had a H&S qualification.

83.3% of editors responded with respect to years spent practising as a reporter, journalist and editor. On average, the editors had practised 1.9 years as reporters, 3.3 years as journalists, and 7.9 years as editors.

94.4% of editors perceived there to be a need to improve construction H&S. Table 2 indicates that the number of fatalities (52.9%), followed by conditions on site (observed) (47.1%), predominated among reasons for their perception. The number of fatalities and injuries in the South African construction industry has received frequent coverage in the written media (Construction World, 1998) and in reports such as the Department of Labour's Annual Report (Department of Labour, 1999).

Table2: Reasons for perceived need to improve construction H&S

Reason	Response (%)
Number of fatalities	52.9
Number of injuries	35.3
Conditions on site (observed)	47.1
Reports	35.3
Industry comment	11.8

38.9% of editors perceived themselves as capable of rating the H&S performance of the South African construction industry. Of the 61.1% that perceived themselves as capable, the greater percentage

(63.6%) rated the H&S performance as 'poor' (Table 3). The rating reflects the status quo in terms of South African performance relative to the performance of selected international countries (Smallwood, 2000).

Table 3: Rating of H&S performance by editors

Rating	Response (%)
Very poor	9.1
Poor	63.6
Satisfactory	18.2
Good	9.1
Very good	0.0

Editors who had rated the H&S performance as 'poor' or 'very poor', were then asked to identify which of a number of aspects contributed to the non-satisfactory performance.

Lack of management commitment (87.5%) and lack of worker training (87.5%) predominated among ten aspects, followed by lack of worker participation (Table 4). The aforementioned have all been previously identified as aspects contributing to the lack of, or, inadequate H&S in South Africa (Smallwood, 2000).

Table 4: Aspects which have contributed to the 'poor' or 'very poor' H&S performance

Aspect	Response (%)
Lack of management commitment	87.5
Lack of worker training	87.5
Lack of worker participation	50.0
Industry culture	37.5
Lack of industry commitment	37.5
Lack of designer consideration	25.0
Lack of management education	25.0
Non-enforcement of legislation	25.0
Lack of client prioritisation	12.5
South African culture	12.5

88.8% of editors believe that the media can positively influence H&S.

44.4% of editors responded that H&S is 'very important', followed by 'important' (27.8%) and 'fairly important' (22.2%). Only 5.6% responded that H&S is 'not important'.

Table 5 indicates that articles (88.9%) predominate among the various forms of coverage H&S is afforded by editors. The next highest percentage was relative to news (44.4%).

Table 5: Publications' form of H&S coverage

Form	Response (%)
Articles	88.9
News	44.4
Letters	27.8
Award	27.8
Announcement	16.7
Columns	16.7
Editor's comment	11.1

On average, editors devoted 6.2% of their editorial to H&S.

Although 44.5% of editors responded that they never received complaints regarding the communication of unhealthy and unsafe construction practices in their publications, 36.8% responded that sometimes they did, and 22.2% rarely.

Tables 7, 8 and 9 contain findings in the form of a range of responses: always, often, sometimes, rarely, never, no response; not at all, a little, a fair bit, extensively, don't know, and more, adequate, less, don't know. Given the possible range of responses, an importance index (II) with a minimum of

zero and a maximum of either four, three or two, was computed to enable ranking of

the problems. The II is calculated using the formulae:

$$\frac{4n_1 + 3n_2 + 2n_3 + 1n_4 + 0n_5}{(n_1 + n_2 + n_3 + n_4 + n_5)} \quad \text{or} \quad \frac{3n_1 + 2n_2 + 1n_3 + 0n_4}{(n_1 + n_2 + n_3 + n_4)} \quad \text{or} \quad \frac{2n_1 + 1n_2 + 0n_3}{(n_1 + n_2 + n_3)}$$

where n_1 = Always
 n_2 = Often
 n_3 = Sometimes
 n_4 = Rarely
 n_5 = Never/No response

where n_1 = Extensively
 n_2 = A fair bit
 n_3 = A little
 n_4 = Not at all/
Don't know

where n_1 = Extensively
 n_2 = Adequate
 n_3 = Less/Don't know

Table 6 indicates that, based upon an II with a minimum value of 0.0, and a maximum value of 4.0, editorial is the aspect most frequently reviewed by editors, or their colleagues, to ensure that the general public is not exposed to the portrayal of unhealthy and unsafe

practices. Editorial is followed by photographs, columns (regular), advertorial and advertisements. Given that 2.00 is the midpoint value of the II, only the review of editorial can be regarded as prevalent.

Table 6: Media aspects reviewed by editors

Media aspect	Response (%)						II	Rank
	Never	Rarely	Some-times	Often	Always	No response		
Editorial	16.7	16.7	22.2	16.7	22.2	5.5	2.00	1
Photographs	38.9	5.5	5.5	22.2	22.2	11.1	1.72	2
Columns (regular)	50.0	0.0	6.3	6.3	25.0	12.6	1.31	3
Advertorial	33.3	11.1	11.1	16.7	11.1	16.7	1.28	4
Advertisements	44.4	5.5	16.7	11.1	11.1	0.0	1.17	5

Table 7 indicates that based upon an II with a minimum value of 0 (not at all) and a maximum value of 3 (extensively), contractors are the stakeholder perceived to be able to contribute most to improving construction H&S, followed by management (construction), and workers (construction).

The potential of contractors, management and workers to contribute to improving construction H&S is well documented, the findings reflecting the 'hierarchy of potential' in literature (Levitt and Samelson, 1993; Hinze, 1997).

Industry associations, the Department of Labour (DOL) and unions, achieved

rankings of fourth, fifth and sixth respectively. Industry associations can raise and maintain a level of awareness, disseminate information, facilitate research, and organise competitions. The DOL can increase the number of inspections, however, the DOL is constrained in terms of the number of available inspectors. Unions can raise the level of awareness, train members, negotiate the inclusion of H&S in labour agreements and participate in partnering processes (Levitt and Samelson, 1993; Hinze, 1997).

Insurers, which achieved a ranking of seventh can provide funding for, or employ their own H&S advisors, and

promote and sponsor H&S competitions. Tertiary institutions, which achieved a ranking of eight, can contribute through the inclusion of H&S in all construction and related curricula (Smallwood, 2000).

It is notable that editors, journalists and reporters achieved rankings of ninth, tenth and eleventh respectively.

Overall, it is significant that all IIs were above the midpoint value of 1.50, indicating that the potential for all stakeholders to contribute to improving H&S exists.

Table 7: Extent to which construction industry stakeholders can contribute to improving construction H&S

Stakeholder	Extent of contribution (%)					II	Rank
	Not at all	A little	A fair bit	Extensively	Don't know		
Contractors	0.0	0.0	11.1	88.9	0.0	2.89	1
Management Construction	0.0	5.6	5.6	88.9	0.0	2.83	2
Workers (construction)	0.0	22.2	0.0	77.8	0.0	2.56	3
Industry associations	0.0	5.6	27.8	61.1	5.6	2.44	4
Department of Labour	0.0	16.7	27.8	55.6	0.0	2.39	5
Unions	0.0	5.6	16.7	66.7	11.1	2.39	6
Insurers	0.0	5.9	29.4	52.9	11.8	2.24	7
Tertiary institutions	0.0	22.2	38.9	38.9	0.0	2.17	8
Editors	0.0	27.8	61.1	11.1	0.0	1.83	9
Journalists	5.6	22.2	66.7	5.6	0.0	1.72	10
Reporters	5.6	27.8	66.7	0.0	0.0	1.61	11

Table 8 indicates the ranking of various interventions, based upon an II with a minimum value of 0 (less/don't know), and a maximum value of 2 (more). It is notable that all interventions achieved an II above the midpoint value of 1.0, indicating that generally the perception exists that more attention relative to the interventions is required. Legislation is the only intervention for which the percentage response relative to 'adequate', exceeded the percentage response relative to 'more', and marginally so.

It is significant that management education, worker education and industry promotion achieved rankings of first, second and third respectively, both management and worker education achieving IIs of 2.0 (the maximum value). The perceived degree of attention required relative to these interventions correlates with the top four ranked

stakeholders in terms of the extent industry stakeholders can contribute to improving construction H&S: contractors; management (construction); workers (construction), and industry associations (Table 7).

Given the objectives of the study, it is notable that magazines (industry) achieved a ranking of fourth, followed by visual media.

The editors were presented with a double page A3 size construction magazine advertisement promoting a light delivery vehicle. The advertisement included a four floor reinforced concrete frame building under construction as a backdrop. Editors were requested to record any observed unsafe acts, unsafe conditions and poor housekeeping. The observations and the percentage related response is recorded in parentheses.

Table 8: Perceived degree of attention required

Intervention	Degree of attention (%)				II	Rank
	Less	Adequate	More	Don't know		
Management education	0.0	0.0	100.0	0.0	2.00	1
Worker education	0.0	0.0	100.0	0.0	2.00	2
Industry promotion	5.9	0.0	94.1	0.0	1.88	3
Magazines (industry) – awareness	0.0	17.6	82.4	0.0	1.82	4
Visual media – awareness	0.0	11.1	77.8	11.1	1.67	5
Inspections by DOL	0.0	5.6	77.8	16.7	1.61	6
Union prioritisation	5.6	22.2	66.7	5.6	1.56	7
Ministerial (Govt) prioritisation	0.0	38.9	55.6	5.6	1.50	8
Legislation	0.0	50.0	44.4	5.6	1.39	9
Newspapers – awareness	0.0	38.9	50.0	11.1	1.39	10
Magazines (general) – awareness	0.0	33.3	50.0	16.7	1.33	11
Prioritisation by DOL	0.0	22.2	50.0	27.8	1.22	12

- “Site is in a mess.” (27.8%)
- “Rubble.” (5.6%)
- “Poor housekeeping.” (27.8%)
- “Plenty.” (5.6%)
- “Inadequate safety barriers.” (38.9%)
- “Shuttering not stacked.” (11.1%)
- “Unprotected stairs.” (16.7%)
- “Lack of supervisor discipline.” (5.6%)
- “Site barbecues – unhygienic, unsafe and poor practice.” (5.6%)
- “Wasteful aspects.” (5.6%)
- “No fencing around building site.” (5.6%)

A total of twelve comments in general regarding the role of the media in construction H&S were received. 5.6% of editors had two comments, 55.6% had one comment and 38.9% had no comments. Most of the comments have been presented below:

- “The media will respond to industry attempts to promote safety on site.”
- “Legislation and education are needed – media’s role is very minor.”
- “Merely reporting is not enough. Exposing unsafe acts is essential and publicising prosecutions is essential.”
- “Use media more to get across a simple message.”

- “The media needs to: compare the construction industry with others in South Africa to see how bad it is; compare with construction industries overseas to see if we do well, or badly, and monitor trends to see if we are improving.”
- “It should strive to be more aware and treat safety issues more seriously and allocate more space to these issues.”
- “They have an important role to play in communicating fact and creating perceptions.”
- “If more editorial is provided by specialists in the field we will publish willingly.”
- “The media needs companies to be an open book as far as OH&S is concerned.”
- “We can play a very important role in promotion.”
- “The media is merely a medium, the onus is on those concerned with OH&S to utilise this medium to voice their concerns.”

Conclusions

The conclusions are presented relative to the objectives of the study.

The role of the media

The print media can disseminate information in the form of news, dedicate editorial and, or columns to H&S, publish articles, conduct and publish interviews, undertake investigative reporting and review photographs, advertisements and advertorial, to ensure that unhealthy and unsafe practices are not communicated.

Currently, the print media afford H&S coverage primarily in the form of articles. However, given that H&S is a 'second level' project parameter, vis a vis, cost, quality and schedule, then the average percentage of editorial devoted to H&S, and the other forms of coverage afforded H&S, indicate commitment to H&S by editors of construction magazines and journals.

The general comments elicited during the descriptive survey indicate that the print media perceives its role to be important, but not critical. However, the comments indicate that industry initiative with respect to the role of the media is necessary, and may be a prerequisite.

The need for the media to contribute
The print media in the form of magazines, newspapers and journals has a responsibility as an industry stakeholder to contribute to H&S related endeavours. This responsibility arises from the level of fatalities, injuries and disease in the industry and the cost thereof to the country as a whole. The need for the media to do so, is reinforced by the media's role and potential to influence the industry and society as a whole.

The fourth and fifth placed rankings of magazines (industry) and the visual media respectively in terms of the degree of attention required relative to various interventions in terms of H&S reinforces the need for the media to contribute.

The influence and impact of the media
The print media can: bring the hazardous nature of materials and / or processes to the attention of industry and society; expose abusive organisations, and

engender focus on H&S through the citing of the benefits thereof.

The descriptive survey findings indicate that only the review of editorial by editors, or their colleagues, to ensure that unhealthy and unsafe construction practices are not communicated, can be regarded as prevalent. This implies that other aspects such as photographs, columns (regular), advertorial and advertisements can be reviewed more frequently.

The print media, represented by editors, journalists and reporters, are perceived to be the stakeholder to have the least potential to contribute to improving construction H&S.

Perceptions of editors

The findings of the descriptive survey indicate that editors are:

- aware of the need to improve construction H&S, which need is reinforced by industry statistics;
- knowledgeable with respect to the aspects which have contributed to the 'poor' H&S performance of the industry, and
- aware, to a degree, of what constitutes unsafe acts, unsafe conditions and poor housekeeping, based upon their review of the advertisement during the descriptive survey.

Recommendations

The construction industry, more specifically, industry associations, should make more use of the print media to engender focus on H&S.

Editors should endeavour to increase the percentage of their editorial devoted to H&S. Editors, reporters, journalists and photographers should review the media aspects pertinent to their occupation, such as: editorial; photographs; columns (regular); advertorial, and advertisements, to ensure that unhealthy and unsafe practices are not communicated.

Editors, reporters, journalists and photographers should be vigilant, and expose unsafe practices and conditions in the industry. The photograph of workers removing asbestos cement roof sheeting at the Casino project in Port Elizabeth without wearing any personal protective equipment, which accompanied the brief report 'Asbestos ban supported', is an example of the need to do so (Eastern Province Herald, 2000).

References

- J Anderson. The problems with construction. The Safety and Health Practitioner, May, 29 and 30, 1997.
- Centre to Protect Workers' Rights (CPWR). Building a Safety Culture-Report on the Second National Conference on Ergonomics, Safety and Health in Construction. CPWR, Washington, D.C. 1995.
- Compensation Commissioner. Report on the 1995 Statistics. www.wcomp.gov.za, 2000
- Construction World. And now we wait... Construction World, August, 3, 1998.
- Department of Labour (DOL). Annual Report 1998. Pretoria, 1999.
- Eastern Province Herald. Asbestos ban supported. 23 September, 2, 2000.
- D Grossman. Construction industry builds a safe work place. Safety and Health, April, 48-51, 1991.
- JW Hinze. Indirect costs are a major portion of job site injury costs. Concrete Construction, March, 229, 1992.
- JW Hinze. Construction Safety. Prentice Hall, New Jersey, 1997.
- D Kotelchuck. Asbestos: "The Funeral Dress of Kings" – and Others. In D Rosner & G Markowitz. Dying for Work. Indian University Press, Indianapolis, 1989.
- RE Levitt and NM Samelson. Construction Safety Management . 2nd Edition. John Wiley & Sons, Inc., New York, 1993.
- JJ Smallwood. A study of the relationship between occupational health and safety, labour productivity and quality in the South African Construction industry. Unpublished PhD (Construction Management), Thesis, University of Port Elizabeth, Port Elizabeth, 2000.
- The Business Roundtable. Improving construction safety performance Report A-3. The Business Roundtable, New York, 1995.
- The Civil Engineering and Building Contractor. SAACE's offer to government. The Civil Engineering and Building Contractor, April, 8, 9, 11 and 13, 1999.
- J Vivian. The Media of Mass Communication. 4th Edition. Allyn and Bacon, Massachusetts, 1997.
- GSJ Wilde. Target Risk. PDE Publications, Toronto, 1994.