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Media's impact on adolescents' developmental trajectories has been a public concern; however, how and what makes the mechanism essentially operate have not extensively explained. This cross-sectional study examined the hypothesis that "Message Interpretation Process" (MIP), parental involvement, and peer norm were potential factors that influenced the association between youth's violence and their exposure of violent contents on TV. Data were from 993 adolescents aged 12-20 in Taipei, Taiwan. Stepwise linear regression was used to test the study hypothesis, and showed moderate to strong associations between youth's violent behaviors and the exposure of the sexual contents, soap opera, sport on TV (£]= 5.07, 2.77, and 1.54, respectively, all p-value<0.002). Youth who considered violence was associated with social stigma was significantly less likely to behave violently, compared to those who recognized as 'no affect,' after controlling for youth's socio-demographic effects. Parental monitoring exhibited protective effects on adolescents' violence. This study extends previous understanding on how media operates to affect the development of youth's problematic behaviors. Effective intervention and prevention programs may further be more efficiently designed and administered by fitting in the crucial roles of MIP, parental monitoring and peer norm cognition.

**Key words:** media use, adolescent violence, message interpretation process, parental monitoring, and peer norm.

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4. T fi S ~ ~ (Message Interpretation Process model, MIP)

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6. ⁄ ¥ ˜ † (parental discussion) "" ¤ ƒ

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" ⁄ @ ¡ G ‹ ª ¤ s … ¸ ¥ » " (N=993)f ˙flS…x

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|---|---|---|---|---|---|
| ' $O | ¤k | 506 | (51.6%) | - | - |
| | ⁄k | 474 | (48.4%) | - | - |
| ƒ ≈ | 13-15 | 496 | (51.7%) | - | - |
| | 16-18 | 420 | (43.8%) | - | - |
| | 19+ | 43 | (4.5%) | - | - |
| " , g ƒ | ⁄ ⁄ ¥H⁄W | 542 | (55.9%) | - | - |
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| ⁄ ¥ − R^"‹"A | | | | | |
| | ⁄ wB | 831 | (86.7%) | - | - |
| | ⁄ '~/´ −B | 127 | (13.3%) | - | - |
| ˙•~" †{ | " ¦N | 357 | (36.5%) | - | - |
| | ⁄£" ¦N | 620 | (63.5%) | - | - |
| ˙•~¥ ¥u | ,g– ' ¥fiu | 962 | (97.7%) | - | - |
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| ¥ d ‡ ϱ'¥ | 6-7+ ƒ,/¶g | 830 | (86.7%) | - | - |
| | 5- ƒ,/¶g | 127 | (13.3%) | - | - |
| ‡ s ˜…@ | 6-7+ ƒ,/¶g | 921 | (97.4%) | - | - |
| | 5- ƒ,/¶g | 25 | (2.6%) | - | - |
| " ^ , ¥ | 6-7+ ƒ,/¶g | 880 | (92.3%) | - | - |
| | 5- ƒ,/¶g | 73 | (7.7%) | - | - |
| " ^ , ¥ | 6-7+ ƒ,/¶g | 904 | (96.2%) | - | - |
| | 5- ƒ,/¶g | 36 | (3.8%) | - | - |
| ¯ Ø\|, ¥ | 6-7+ ƒ,/¶g | 868 | (93.0%) | - | - |
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| fi £ ˙⁄ø | 6-7+ ƒ,/¶g | 900 | (96.2%) | - | - |
| | 5- ƒ,/¶g | 36 | (3.8%) | - | - |

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| ° § @ | "§-6ø7+ | ƒ,/¶g | 887 | (93.9%) | - | - | - |
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| … ⁄ O ƒ, { 6ø7+ | ƒ,/¶g | 895 | (96.0%) | - | - |
| 5- | ƒ,/¶g | 37 | (4.0%) | - | - |
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| ƒ ‹ … ⁄O | | 973 | - | 3.65 | 3.34 | 0-18 |
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| fl u Œ« | | 978 | - | 8.47 | 3.30 | 0-15 |
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| – ¡ ƒ ⁄ ø | 5.07 | 0.067 | 0.067 | 54.21 | <0.001 |
| ‡ s ˜ … @ | 2.77 | 0.140 | 0.025 | 41.10 | <0.001 |
| ¯ Ø ¤ \| ¦ ¥ | 1.54 | 0.158 | 0.018 | 35.42 | 0.001 |
| – ˜ † „ q fi ¶ ¡ | 0.05 | 0.171 | 0.013 | 31.036 | 0.002 |
| ¥ ‹ q ¦ ¥ | 0.79 | 0.177 | 0.006 | 26.96 | 0.019 |
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| · ` – « | 0.37 | 0.145 | 0.145 | 121.52 | <0.001 |
| » { ƒ P « | 0.15 | 0.189 | 0.044 | 83.27 | <0.001 |
| – ¡ ƒ ⁄ ø | 3.68 | 0.247 | 0.025 | 58.40 | <0.001 |
| ‹ ƒ « | 0.60 | 0.266 | 0.019 | 51.55 | <0.001 |
| ‡ s ˜ … @ | 2.29 | 0.281 | 0.015 | 46.21 | 0.001 |
| ¯ Ø ¤ \| ¦ ¥ | 1.38 | 0.293 | 0.012 | 41.94 | 0.001 |
| ¥ ‹ q ¦ ¥ | 0.89 | 0.307 | 0.007 | 34.86 | 0.005 |
| … ƒ ¡ ¢ » ¡ G ⁄ ¥ …v¯T | | | | | |
| – ¡ ƒ ⁄ ø | 4.67 | 0.065 | 0.065 | 50.28 | <0.001 |
| ‡ s ˜ … @ | 3.06 | 0.133 | 0.026 | 37.01 | <0.001 |
| ⁄ ¥ ¥ ¿ ƒ W – j | 0.27 | 0.155 | 0.021 | 32.95 | <0.001 |
| – ˜ † „ q fi ¶ ¡ | 0.04 | 0.171 | 0.016 | 29.71 | 0.002 |
| ¯ Ø ¤ \| ¦ ¥ | 1.29 | 0.181 | 0.01 | 26.44 | 0.004 |
| ⁄ ¥ " • | -0.05 | 0.186 | 0.006 | 23.50 | 0.01 |
| … ƒ ¡ ¢ … ¡ G ƒ P « ‡ W ‰ d | | | | | |
| … ⁄ O " B ⁄ ″ æ ¤ | 2.06 | 0.110 | 0.110 | 93.29 | <0.001 |
| – ¡ ƒ ⁄ ø | 4.90 | 0.154 | 0.044 | 68.49 | <0.001 |
| ¯ Ø ¤ \| ¦ ¥ | 1.59 | 0.184 | 0.03 | 56.45 | <0.001 |
| ‡ s ˜ … @ | 2.57 | 0.220 | 0.017 | 42.22 | <0.001 |
| „ " B ″ ¤ ¥ ¸ … ⁄ O ƒ ‡ › t → • Q " k | -0.73 | 0.231 | 0.011 | 37.41 | 0.003 |
| – ˜ † „ q fi ¶ ¡ | 0.03 | 0.236 | 0.002 | 32.91 | 0.029 |

ø ¡ G l . ' ƒ ‡ … ƒ ¡ ‹ ‰ ª ° Š O ¡ ¦ ~ ˜ ¡ B " , g f a ¡ ƒ B ⁄ ¥ – B « " ‹ ¡ ′ ′ ª A ¥ ″ „ fi " † {
⁄ Š ″ ¶ N « ¥ H ⁄ ¸ · ¥ ″ ¦ ⁄ Š ¥ X fl fi u

" ⁄ T ¡ G – ˜ † ⁄ j † ‡ · C ¯ Ø ¡ B T fi Š ˜ ˜ ˜ œ { ¡ B ⁄¥ …v¯T⁄¿ƒP «‡
‰ ˜»—‡ v ¤ B ‰ u ' °j´k… ƒ¡

| ¿ ¯ (¶ ¿ ƒ Š·) | £]¹ | $R^2$ | £G$R^2$ | F value | P value |
|---|---|---|---|---|---|
| … ƒ¡¢„¡ G · C Ø– ˜† | | | | | |
| ″ ^ ,'¥ | 1.27 | 0.040 | 0.040 | 31.35 | 0.01 |
| ‡ s ˜…@ | 2.43 | 0.058 | 0.019 | 23.47 | 0.002 |
| – ¡ ƒ⁄ø | 2.83 | 0.071 | 0.013 | 19.41 | 0.011 |
| – ˜†„ q fi ¶¡ | 0.04 | 0.080 | 0.009 | 16.47 | 0.013 |
| ¯Ø¤|, ¥ | 0.94 | 0.080 | 0.005 | 12.47 | 0.044 |
| … ƒ¡¢″¡ G T fi Š ˜˜ œ { | | | | | |
| ‹ ƒ« | 0.88 | 0.121 | 0.121 | 98.84 | <0.001 |
| · ≈ « | 0.26 | 0.154 | 0.033 | 65.36 | <0.001 |
| »{ƒP« | 0.14 | 0.180 | 0.025 | 52.15 | <0.001 |
| ″ ^ ,'¥ | 1.21 | 0.198 | 0.018 | 44.02 | 0.008 |
| ‡ s ˜…@ | 1.98 | 0.207 | 0.009 | 37.20 | 0.008 |
| ¯Ø¤|, ¥ | 0.98 | 0.217 | 0.005 | 28.14 | 0.032 |
| … ƒ¡¢»¡ G ⁄ ¥…v¯T | | | | | |
| ⁄ ¥ › t ƒ V.W–j | 0.21 | 0.061 | 0.061 | 46.66 | <0.001 |
| ″ ^ ,'¥ | 1.34 | 0.094 | 0.034 | 37.64 | 0.006 |
| ⁄ ¥ ″ °@ | -0.07 | 0.110 | 0.016 | 29.73 | 0.001 |
| – ¡ ƒ⁄ø | 2.40 | 0.122 | 0.012 | 25.05 | 0.037 |
| ‡ s ˜…@ | 2.01 | 0.129 | 0.007 | 21.32 | 0.013 |
| ⁄ ¥ ¥¿ƒ V W–j | 0.18 | 0.136 | 0.007 | 18.93 | 0.018 |
| – ˜†„ q fi ¶¡ | 0.03 | 0.142 | 0.005 | 16.94 | 0.035 |
| … ƒ¡¢…¡ G ƒ P «‡W‰d | | | | | |
| … ⁄O" B ⁄ ″æ¤ | 1.78 | 0.058 | 0.058 | 45.96 | <0.001 |
| ‡ s ˜…@ | 2.66 | 0.086 | 0.029 | 35.43 | <0.001 |
| „ " B″¤ ¥¿… ⁄Oƒ‡›t› – @"k | -1.22 | 0.108 | 0.021 | 30.19 | <0.001 |
| „ " B″¤ ¥¿… ⁄Oƒ‡¥¿› – @"k | -1.69 | 0.119 | 0.011 | 25.33 | 0.003 |
| – ˜†„ q fi ¶¡ | 0.03 | 0.130 | 0.011 | 22.35 | 0.023 |
| ¯Ø¤|, ¥ | 1.21 | 0.143 | 0.007 | 17.83 | 0.007 |
| – ¡ ƒ⁄ø | 2.45 | 0.153 | 0.005 | 15.00 | 0.028 |

ø¡Gl.' ƒ‡… ƒ¡‹ ‰ ª°ŠO¡ Ÿ~˜ ¡B" , gjaƒB ⁄¥– B « "‹¡'A ¥″„ fi " †{
⁄Š" ¶N« ¥H⁄¿ · ¥ ″ ¼ ⁄Š¥ X flfiu

" ¥ | ¡ G – ˜ † ⁄ j † ‡ · C ¯ Ø ¡ B T fi Š ˜ ˜ ˜ œ { ¡ B ⁄¥ …v¯T⁄¿ƒP «‡
‰ ˜»—‡ v ¤ B ‰ u ' °j´k… ƒ¡

| ¿ ¯ (¶ ¿ ƒ Š·) | £]¹ | $R^2$ | £G$R^2$ | F value | P value |
|---|---|---|---|---|---|
| … ƒ¡¢„¡ G · C Ø– ˜† | | | | | |
| – ¡ ƒ⁄ø | 4.69 | 0.159 | 0.046 | 70.77 | <0.001 |
| ¯Ø¤ \| ¸¥ | 1.25 | 0.191 | 0.012 | 44.28 | 0.002 |
| – ˜†„ q ﬂ ¶¡ | 0.04 | 0.212 | 0.010 | 33.48 | 0.003 |
| … ƒ¡¢"¡ G T fi Š ˜˜ œ { | | | | | |
| ‹ ƒ« | 0.72 | 0.147 | 0.147 | 121.88 | <0.001 |
| · ≐ « | 0.33 | 0.288 | 0.063 | 95.45 | <0.001 |
| – ¡ ƒ⁄ø | 3.53 | 0.308 | 0.002 | 78.78 | <0.001 |
| »{ƒP« | 0.09 | 0.326 | 0.007 | 56.93 | 0.004 |
| … ƒ¡¢»¡ G ⁄ ¥…v¯T | | | | | |
| ⁄ ¥ ¥ ¿ ƒ V.W–j | 0.22 | 0.162 | 0.037 | 69.26 | 0.001 |
| ° Š @ ⁄"Ø | 1.22 | 0.192 | 0.030 | 56.55 | 0.005 |
| – ¡ ƒ⁄ø | 3.33 | 0.225 | 0.012 | 41.36 | 0.001 |
| ¯Ø¤ \| ¸¥ | 1.08 | 0.245 | 0.008 | 32.90 | 0.010 |
| ⁄ ¥ ¥ ¿ ƒ V.W–j | 0.12 | 0.259 | 0.006 | 27.48 | 0.009 |
| ⁄ ¥ " °@ | -0.04 | 0.265 | 0.006 | 25.41 | 0.022 |
| … ƒ¡¢…¡ G ƒ P «‡W‰d | | | | | |
| … ⁄ O " B˝⁄æ¤ | 1.48 | 0.189 | 0.069 | 86.87 | <0.001 |
| „ " B˝¤ ¥¿… ⁄Of ‡ › t →•Q"k | -1.10 | 0.215 | 0.026 | 68.01 | <0.001 |
| – ¡ ƒ⁄ø | 3.89 | 0.239 | 0.023 | 58.12 | <0.001 |
| ¯Ø¤ \| ¸¥ | 1.18 | 0.251 | 0.012 | 49.62 | 0.003 |

ø¡Gl.' ƒ‡… ƒ¡‹ ‰ ª°ŠO¡ ﬁ~˜ ¡B" , gfaƒB ⁄¥– B « "‹¡"A ¥˝„ fi " †{
⁄S" ¶Nk« ¥H⁄¿ · ¥ ˝ ﬁ ⁄$¥ X flfiu