

A Validity Test of Movie, Television, and Video-Game Ratings

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ABSTRACT. *Context.* Numerous studies have documented the potential effects on young audiences of violent content in media products, including movies, television programs, and computer and video games. Similar studies have evaluated the effects associated with sexual content and messages. Cumulatively, these effects represent a significant public health risk for increased aggressive and violent behavior, spread of sexually transmitted diseases, and pediatric pregnancy. In partial response to these risks and to public and legislative pressure, the movie, television, and gaming industries have implemented ratings systems intended to provide information about the content and appropriate audiences for different films, shows, and games.

Objective. To test the validity of the current movie-, television-, and video game-rating systems.

Design. Panel study.

Measure. Participants used the KidScore media evaluation tool, which evaluates films, television shows, and video games on 10 aspects, including the appropriateness of the media product for children based on age.

Results. When an entertainment industry rates a product as inappropriate for children, parent raters agree that it is inappropriate for children. However, parent raters disagree with industry usage of many of the ratings designating material suitable for children of different ages. Products rated as appropriate for adolescents are of the greatest concern. The level of disagreement varies from industry to industry and even from rating to rating. Analysis indicates that the amount of violent content and portrayals of violence are the primary markers for disagreement between parent raters and industry ratings.

Conclusions. As 1 part of a solution to the complex public health problems posed by violent and sexually explicit media products, ratings can have value if used with caution. Parents and caregivers relying on the ratings systems to guide their children's use of media products should continue to monitor content independently. Industry ratings systems should be revised with input from the medical and scientific communities to improve their reliability and validity. A single ratings system, applied universally across industries, would greatly simplify the efforts of parents and caregivers to use the system as well as the efforts of outside parties to monitor the use and validity of the system. *Pediatrics* 2001;107:1302-1308; *television, ratings, video games, movies.*

ABBREVIATIONS. MPAA, Motion Picture Association of America; G, general audience; PG, parental guidance suggested; PG-13, parents strongly cautioned; R, restricted; NC-17, no one under 18 admitted; TV-Y, for all children; TV-Y7, directed to older children; TV-G, general audience; TV-PG, parental guidance suggested; TV-14, parents strongly cautioned; TV-MA, mature audiences only; E, everyone; T, teen; M, mature; AO, adults only; SD, standard deviation.

Images, events, and behaviors modeled in movies, television shows, and computer and video games can have significant effects on children. Although parents voice their concern over violence, sex, and adult language in media and game programming, a parallel public health concern has emerged in the medical community. Portrayals of violence and messages about sexual behavior can shape the attitudes and values of children, who act on those values as they grow up.

The American Medical Association first expressed its concerns over the potential impact of violent television programming on children in the early 1950s.¹ Since then, a compelling body of research evidence collected through the efforts of the US Surgeon General,² the National Institute of Mental Health,³ the National Academy of Sciences,⁴ the American Psychological Association,^{5,6} the American Medical Association,⁷ and the American Academy of Pediatrics,⁸ among other institutions, demonstrates that the original concern with violence on television was neither misplaced nor overstated.

Children and youth are spending a large percentage of their time using media products. The average child 2 to 18 years old watches 2 hours and 46 minutes of television each day, along with 13 minutes of movies per day.⁹ The average child 2 to 17 years of age plays video games for 1 hour each day.¹⁰ The degree to which their parents and caregivers monitor their use varies significantly according to the product. Fifteen percent of parents always use the TV-rating system to choose what programs their children may watch, compared with 25% of parents who always use industry ratings to select appropriate games and 69% of parents who always use ratings to select appropriate movies.¹⁰ Considered in tandem with the fact that 53% of children 2 to 18 years of age (65% of children ages 8-18 years) have a television set right in their own bedrooms,⁹ these data suggest that television viewing is the least monitored media activity, followed by computer game usage, and trailed by movie viewing.

To study the validity of ratings systems for media products, it is necessary to understand how and why

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Received for publication May 11, 2000; accepted Sep 13, 2000.

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they were constructed. The 3 ratings systems evolved independently of each other. The system adopted by the Motion Picture Association of America (MPAA) for rating movies has been in place the longest—since 1968—whereas the system for rating television programming has only been in place only since 1997. Computer and video games have been rated since 1994.

As the oldest system, the MPAA movie ratings have set the precedent for the methods and tools used by the television and gaming industries to rate their products, but the MPAA system is by no means a definitive standard. Today's parents and caregivers are faced with a veritable alphabet soup of ratings, many of which are similar to, yet different from, their counterparts in other genres. Currently, the MPAA uses 5 ratings to indicate the appropriate audience for a movie—general audience (G), parental guidance suggested (PG), parents strongly cautioned (PG-13), restricted (R), and no one under 18 admitted (NC-17). The television industry used 6 age-based ratings [for all children (TV-Y), directed to older children (TV-Y7), general audience (G), parental guidance suggested (TV-PG), parents strongly cautioned (TV-14), and mature audiences only (TV-MA)]. TV-Y and TV-Y7 have no counterparts in other genres. These age-based ratings have been supplemented with content descriptors (FV for fantasy violence, L for language, V for violence, S for sexual situations, and D for sexual dialogue). These content descriptors are important, and yet they add to the volume of information that a parent is expected to sort and understand. Moreover, NBC, a network with very high viewership, has refused to use the content descriptors to label its shows. To add to the confusion, the gaming industry started out with 2 separate ratings systems, 1 for video games and 1 for computer games. The system for video games has become the standard for all games, but these ratings bear little resemblance to those used for television and movies. The main ratings currently used are everyone (E), teen (T), mature (M), and adults only (AO).

Each of the 3 systems was voluntarily adopted by its respective industry, although under the threat of legislative intervention and mounting public pressure to create informative labels. What these systems have in common are the assumptions underlying their structure and use. The guidelines for rating products are neither specific nor explicit. Ratings are established, assigned, and approved from within the industry itself, never from outside the industry. The systems do not seem to be subject to any kind of testing to ensure that they are appropriately labeling media products.

The use of ratings to guide parents, caregivers, software merchandisers, and box office managers regarding young people's exposure to media products depends on the ability of the ratings to deliver meaningful information about the content of the products being rated. For the public and the medical community to use the ratings systems with confidence, we must first affirm:

1. Are the systems valid? If ratings systems are to be a component of the solution to a public health problem, they should be subject to the same tests of validity as any other recommended health measure. The ratings systems should be demonstrably valid and based on sound science.
2. Are the systems implemented consistently and reliably? The process for determining a rating and appealing a rating must be consistently and reliably applied.
3. Are the systems being used/enforced properly? V-chip technology, box office and movie rental enforcement, and game sales and rentals should reflect proper use of the ratings systems. Parents and caregivers must be able to understand and use the systems in guiding their children's use of media products.

Some studies have examined the reliability of the systems—the degree to which the ratings are being applied consistently. Reliability is a necessary but insufficient condition of validity. For example, ~8 of 10 television shows with violent or sexual behavior did not receive the “V” or “S” content descriptors that the TV-rating guidelines suggest that they should have.¹¹ This lack of reliability raises serious questions as to the validity of the ratings systems because it suggests that ratings are being assigned idiosyncratically rather than systematically.

Additional studies have examined other aspects of the ratings: whether the ratings systems are easy for parents to use, and whether the parents who are supposed to use the systems are aware of their existence.^{12–16} Not surprisingly, the MPAA system for movies is recognized and understood more frequently than its counterparts for television programming and games. Because the MPAA movie system has been in place for 30 years, today's parents grew up with the system and are familiar with its use. Despite their familiarity with the system, however, parents continue to have complaints about how movie ratings are assigned and the overall design of the ratings system.^{17–19}

The present study allows examination of the construct validity of the ratings systems, ie, do the assigned ratings accurately reflect the contents of the products they label? If a tool is valid, its results should, in theory, match up with the results of another valid tool.

METHODS

Participants

Fifty-five adults were recruited through advertisements in the local newspaper. We intended that the raters would provide responses representative of parents. However, it being illegal to hire based on being a parent, participants were required to be parents or grandparents ($n = 48$) or to be child development professionals ($n = 7$). Thirty-five of the participants had been educated in child development or had worked professionally with children in some capacity. The parents had an average of 1.9 children (standard deviation [SD] = 1.2). We included both single and married parents. The participants ranged in age from 22 to 66 years ($\bar{X} = 40$; SD = 10.0). Thirteen of the participants were male and 42 were female. Participants came from a range of socioeconomic and ethnic backgrounds. Participants were paid an hourly rate for their participation.

We recognize that this sample is not random and may be biased. In validity testing with a random national sample of 600 parents (described in more detail below), a majority of the parents agreed with the ratings produced by our participants. Thus, although our participants may be biased, their biases do not seem to be different from those of American parents. The participants did not know that their results would be compared with the industry ratings. Their job was to create ratings that other parents could use to make informed decisions about which shows, movies, and games were appropriate for their children. The KidScore ratings can be found at: <http://www.mediafamily.org/kidscore/index.shtml>.

Instrument

All participants (hereinafter referred to as parents) used the KidScore media evaluation system. KidScore is a tool used to evaluate media products, such as television programs, movies, and computer games, on 10 aspects: 1) the amount of violent content; 2) the portrayal of violence; 3) the extent to which the shows may cause fear in children; 4) the amount of illegal or harmful behavior displayed (this content area includes depictions of drug use, as well as the depictions of behaviors that, if copied, could cause serious harm or would be illegal); 5) the amount of offensive language; 6) the amount of nudity; 7) the amount of sexual content; 8) the appropriateness of the show, film, or game for children ages 3 to 7 years; 9) the appropriateness of the show, film, or game for children ages 8 to 12 years; and 10) the appropriateness of the show, film, or game for children ages 13 to 17 years. These aspects were chosen based on research with parents that suggested that these were salient categories for parents when they consider their children's exposure to film, television, and computer games.¹⁹ Each of the content areas is rated on a 6-point Likert scale.

The KidScore system was developed and revised over a period of 2 years. Focus groups were used to modify the rating forms to make them reliable. Testing with independent raters showed sufficient interrater reliability using the instrument (Spearman $\rho = 0.73$). Additional testing involved a random survey of 600 households. Randomly selected parents of 2- to 17-year-olds were asked to view specific media products and evaluate the KidScore rating for that product. Eighty-seven percent of parents agreed with the content and age-appropriateness ratings. Three quarters of parents believed that KidScore evaluations were excellent or very good in representing the subject product; only 1% believed that KidScore did a poor job. Only 3% of parents believed that the categories included in KidScore were unimportant.¹⁹

Sample of Media Products

Two hundred seventy-six films, 253 television programs (preliminary analyses of 210 television shows were previously reported in a report entitled, *Parents Rate the TV Ratings*. Minneapolis, MN: National Institute on Media and the Family; 1998. Forty-three additional shows were rated for this study, and the total sample of 253 shows was reanalyzed), and 166 computer games were selected to be rated. The products chosen for rating were released, aired, or sold between 1997 and 1999. The products were selected because they were: 1) popular, 2) marketed to children, or 3) likely to be seen or used by children.

Procedure

All parents had 5 hours of initial training using the KidScore rating form and had ongoing training as needed. Each program, film, and game was evaluated by panels of at least 5 parent raters. Each parent evaluated each media product independently of other parents. The size and diversity of the pool of trained raters reduced the risk that products were evaluated by homogenous panels. KidScore evaluations were generated by creating mean ratings for the 5 raters on each panel. This procedure allows for diversity in opinions but does not rate any show based on individual idiosyncratic opinions. With interrater reliability acceptably high, we were ensured that the parents used the KidScore system similarly and typically saw the same things in the products (eg, when 1 parent believed that a show, film, or game included a lot of violence, other parents also believed that it included a lot of violence).

Data Reduction

After mean ratings for each product were generated, the data were reduced to a 3-point scale from a 6-point scale. The final KidScore evaluations are presented using this 3-point scale. The 3 points are labeled:

- Green light, indicating that the product is rated by the parent raters as appropriate for children based on the content area being rated;
- Yellow light, indicating that the raters believed that parents should use caution when allowing their children to watch the program, see the movie, or play the game; and
- Red light, indicating that the raters believed that the product is not recommended for children based on the content area being rated.

Hypotheses

Theoretically, if the industry ratings were valid, we would expect to see high agreement between the industry ratings and the parents' ratings. If the movie ratings were completely valid, we would expect to see the following pattern of results:

- 100% of G-rated movies would receive green lights for 3- to 7-year-olds
- 100% of PG-rated movies would receive green lights for 8- to 12-year-olds
- 100% of PG-13-rated movies would receive green lights for 13- to 17-year-olds

If the television ratings were completely valid, we would expect to see the following pattern of results:

- 100% of shows with TV-Y or TV-G ratings would receive green lights for 3- to 7-year-olds
- 100% of shows with TV-Y7 or TV-PG ratings would receive green lights for 8- to 12-year-olds
- 100% of TV-14-rated shows would receive green lights for 13- to 17-year-olds

If the computer and video game ratings were completely valid, we would expect to see the following pattern of results:

- 100% of games with E ratings would receive green lights for 3- to 7-year-olds
- 100% of games with E ratings would receive green lights for 8- to 12-year-olds
- 100% of T-rated games would receive green lights for 13- to 17-year-olds

RESULTS

To test the validity of the media ratings systems, we compared the industry ratings with the ratings that parents gave each media product using the KidScore rating system. Although there is a trend toward agreement between parent and industry ratings, a number of disagreements can be seen when comparing the parent and industry ratings for different age groups. The detailed results for movie, television, and video game ratings systems are shown separately below for each of 3 age groups (3–7, 8–12, and 13–17 years old). Table 1 compares television industry ratings with parent ratings; Table 2 compares computer game industry ratings with parent ratings; and Table 3 compares movie industry ratings with parent ratings.

Across all ratings systems, one point of agreement between industry ratings and parent raters is simply observed: when an industry rates a product as unsuitable for children (R-rated films, TV-MA-rated shows, M-rated games), parents unanimously agree. Beyond this point of agreement, industry ratings seem to be too lenient compared with how parents

TABLE 1. Comparison of the Movie Industry Ratings With Parent Ratings of Appropriateness for Three Age Groups*

Movie Industry Rating	Appropriateness for 3- to 7-Year-Olds (Judged by Parents)		
	Green Light (%)	Yellow Light (%)	Red Light (%)
G	50	44	6
PG	10	35	55
PG-13	0	1	99
R	0	1	99

Movie Industry Rating	Appropriateness for 8- to 12-Year-Olds (Judged by Parents)		
	Green Light (%)	Yellow Light (%)	Red Light (%)
G	97	3	0
PG	63	29	8
PG-13	5	30	65
R	0	3	97

Movie Industry Rating	Appropriateness for 13- to 17-Year-Olds (Judged by Parents)		
	Green Light (%)	Yellow Light (%)	Red Light (%)
G	100	0	0
PG	96	4	0
PG-13	60	32	8
R	5	19	76

* n = 276 movies.

rate the same products. There are also specific areas of concern.

Figure 1 compares ratings for 3- to 7-year-olds across all 3 media genres using the ratings that indi-

TABLE 2. Comparison of the Television Industry Ratings With Parent Ratings of Appropriateness for Three Age Groups*

Television Industry Rating	Appropriateness for 3- to 7-Year-Olds (Judged by Parents)		
	Green Light (%)	Yellow Light (%)	Red Light (%)
TV-Y	76	16	8
TV-Y7	11	18	71
TV-G	40	45	15
TV-PG	7	10	83
TV-14	0	5	95
TV-MA	0	0	100

Television Industry Rating	Appropriateness for 8- to 12-Year-Olds (Judged by Parents)		
	Green Light (%)	Yellow Light (%)	Red Light (%)
TV-Y	98	2	0
TV-Y7	57	32	11
TV-G	87	8	5
TV-PG	23	39	38
TV-14	0	5	95
TV-MA	0	0	100

Television Industry Rating	Appropriateness for 13- to 17-Year-Olds (Judged by Parents)		
	Green Light (%)	Yellow Light (%)	Red Light (%)
TV-Y	100	0	0
TV-Y7	89	11	0
TV-G	97	3	0
TV-PG	73	21	6
TV-14	15	35	50
TV-MA	0	0	100

* n = 253 television programs.

TABLE 3. Comparison of the Video Game Industry Ratings With Parent Ratings of Appropriateness for Three Age Groups*

Video Game Industry Rating	Appropriateness for 3- to 7-Year-Olds (Judged by Parents)		
	Green Light (%)	Yellow Light (%)	Red Light (%)
E	67	15	18
T	4	3	93
M	0	0	100

Video Game Industry Rating	Appropriateness for 8- to 12-Year-Olds (Judged by Parents)		
	Green Light (%)	Yellow Light (%)	Red Light (%)
E	87	9	4
T	7	21	72
M	0	0	100

Video Game Industry Rating	Appropriateness for 13- to 17-Year-Olds (Judged by Parents)		
	Green Light (%)	Yellow Light (%)	Red Light (%)
E	99	1	0
T	43	39	18
M	0	10	90

* n = 166 games.

cate potential suitability for this age group. Parents agreed most with the appropriateness of TV-Y-rated television shows for this age group, followed by E-rated games and G-rated movies. One half or fewer of the movies and TV shows labeled “suitable for general audiences” were considered appropriate for 3- to 7-year-olds by the parent raters.

Figure 2 compares industry ratings against parent responses for 8- to 12-year-olds. Of the PG-rated movies, 63% received green lights for this age group, and 57% of the TV-Y7-rated shows received green lights. This figure demonstrates how similar-sounding ratings can be applied differently in different genres: movies rated PG received red lights only 8% of the time, whereas television shows rated TV-PG received red lights 38% of the time. A parent who

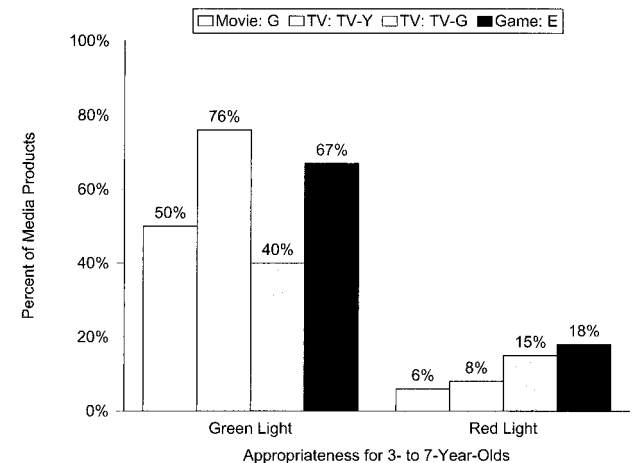


Fig 1. Appropriateness of G-rated movies, TV-Y- or TV-G-rated TV shows, and E-rated video games for 3- to 7-year-olds, as judged by parent raters. Only those judged to be clearly appropriate (by receiving green lights) or clearly inappropriate (by receiving red lights) are shown.

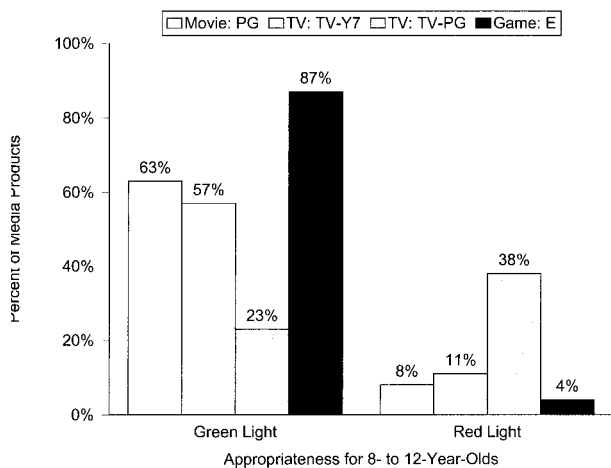


Fig 2. Appropriateness of PG-rated movies, TV-Y7- or TV-PG-rated TV shows, and E-rated video games for 8- to 12-year-olds, as judged by parent raters. Only those judged to be clearly appropriate (by receiving green lights) or clearly inappropriate (by receiving red lights) are shown.

assumes that a TV-PG rating is the equivalent of a movie PG rating would be mistaken.

Figure 3 compares industry ratings against parent responses for 13- to 17-year-olds. Only 60% of the PG-13-rated films were considered by parent raters to be appropriate. Fewer than one half of the T-rated games were given the green light by parent raters. Fifteen percent of the TV-14-rated programs were considered appropriate for teenagers, whereas a full 50% received red lights.

Posthoc analyses were conducted to determine which content areas accounted for disagreement between the parent ratings and the industry ratings. χ^2 analyses were used to determine whether there were systematic relationships between the types of content in media products for each rating level and agreement/disagreement between the industry and parent ratings. The pattern of statistically significant results of these analyses is presented in Table 4. In all cases when there is a significant χ^2 , it is caused by

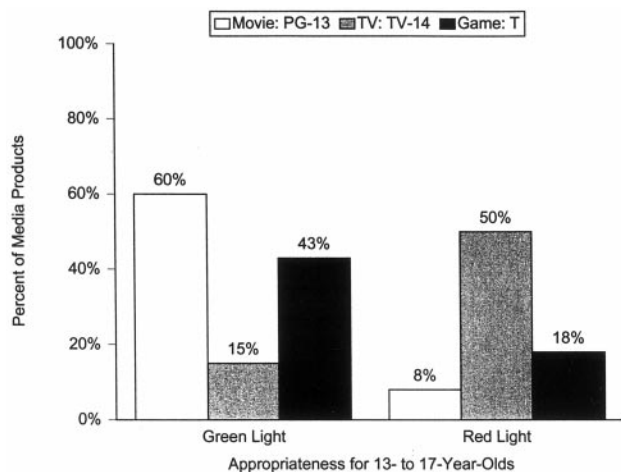


Fig 3. Appropriateness of PG-13-rated movies, TV-14-rated TV shows, and T-rated video games for 13- to 17-year-olds, as judged by parent raters. Only those judged to be clearly appropriate (by receiving green lights) or clearly inappropriate (by receiving red lights) are shown.

having a greater number of yellow or red lights in that category than would be expected by chance.

The data in Table 4 show which of the content areas are systematically related to disagreement between parent and industry ratings. These data do not, however, indicate which areas are most related to disagreement. Stepwise logistic regressions were conducted to determine which content areas are related most strongly to disagreement between parent and industry ratings. Table 5 displays the results of these analyses.

CONCLUSIONS

Ratings of media products can play a critical role in preserving artistic and economic freedom, while simultaneously protecting public health. To date, the ratings systems for movies, TV programs, and games do not adequately fill this role. Our results demonstrate the lack of system in these systems.

Figure 3 demonstrates the beginnings of ratings creep, in which adult material is introduced to products rated for younger audiences. Ratings are not intended to be an industry seal of approval, and individual parents are not relieved of the duty to monitor their children's use of media products. However, when one half of the television shows rated appropriate for teenagers get red lights, it is a signal that the ratings are misleading. Figure 2 shows a similar disconnect between industry ratings and parent ratings in that 38% of the TV-PG-rated shows were deemed inappropriate for 8- to 12-year-olds. These data are especially vital in light of the fact that television is the most constant and least monitored media presence in children's lives.

Regardless of the possible shortcomings of the various rating systems, they do provide some information for parents. Yet, a number of reviews have shown that parents typically do not exert much control over the media that their children consume.^{3,20-22} Only 32% of 10- to 17-year-olds say that their parents use the television rating system,¹⁵ and 90% of teenagers say that their parents never check the video game ratings before allowing them to rent or buy computer or video games.²³ Allowing television sets in children's bedrooms may also make it more difficult to have rules or limits, because there is increased privatization of viewing. One recent study showed that 53% of children have TVs in their bedrooms, and 85% of the time children watch television, parents are not in the room.⁹ Yet, parental limits have been shown to be beneficial in some cases. In 1 experimental study, reducing the amount of television children watched by one half improved performance IQ and increased reading time.²⁴

Physicians have the opportunity to affect parents and children through their roles as educators, clinicians, and concerned citizens.⁷ Incorporating questions about media habits into the patient visit routine allows youth and parents to examine their habits and affords opportunities for physicians to offer advice and support for any areas of concern. The American Academy of Pediatrics has a Media History Form available for physician use.²⁵

TABLE 4. Significant Results of χ^2 Tests of Relationships Between Ratings Agreement/Disagreement and Seven Content Area Ratings for Three Types of Media Split by Three Age Groups

Medium	Age Group (Years)	Industry Rating	Content Areas (Measured by Parents)						
			Amount of Violence	Portrayal of Violence	Fear-Producing Scenes	Illegal or Harmful Behavior	Offensive Language	Nudity	Sexual Content
Movies	3-7	G	*	*	—	*	—	—	—
	8-12	G or PG	*	*	—	*	*	*	*
	13-17	G, PG, or PG-13	—	—	—	—	—	—	—
Television	3-7	TV-Y or TV-G	*	*	*	*	*	*	*
	8-12	TV-Y, TV-Y7, TV-G, or TV-PG	*	*	*	*	*	*	*
	13-17	TV-Y, TV-Y7, TV-G, TV-PG, or TV-14	*	*	*	*	*	*	*
Video and computer games	3-7	E	*	*	*	*	*	—	—
	8-12	E	*	*	*	*	—	—	—
	13-17	E or T	*	*	*	*	—	*	—

* χ^2 significant at at least the $P < .05$ level; —, χ^2 not significant.

Even if parents do begin to use ratings systems more consistently in the future, the signs of ratings creep in products rated appropriate for 13- to 17-year-olds undermine confidence in a voluntary ratings system. We are forced to conclude that nothing short of a universal overhaul of the approach taken to rating media products will safeguard public health and ensure public confidence in the system.

Our recommendations are twofold and include long-term and short-term measures to address the shortfalls in the ratings systems.

Long-Term Measures

Universal Ratings System

Our strongest recommendation is for the development of a universal system for rating media products. The current alphabet soup of systems is too confusing and even contradictory for parents to use effectively. Multiple systems are also more complicated to test and monitor than a single system, making it more difficult for the academic and medical communities to participate in ensuring the efficacy of this solution to the threats to public health. (Besides the 3 systems tested here, there are separate and

different systems for music, video arcade games, Internet sites, pay-cable shows, etc.) A universal ratings system is far more efficient than the use of separate systems for each media genre.

System Design

In the design of this universal system, appropriate experts in academia and the medical community should be consulted, with opportunities for public comment. To be effective, the universal system should include the following characteristics:

- Explicit goal(s)
- Explicit guidelines for raters
- Independent raters
- Good interrater reliability
- A format that is easy for users to understand
- Appropriate age-based information
- Appropriate quantification/description of product content
- Concordance with viewer ratings
- Coverage of a broad range of products
- Products rated in a timely manner
- Broad and easily accessible distribution

TABLE 5. Predictors of Disagreement Between Parent Ratings and Industry Ratings

Medium	Age Group (Years)	Industry Rating With Which Parents Disagreed	Content Area Predictors of Disagreement (in Order of Entering the Regression)	Amount of Variance Explained (Nagelkerke R ²)
Movies	3-7	G	Amount and portrayal of violence	0.84
	8-12	G or PG	Nudity, amount of violence	0.42
	13-17	G, PG, or PG-13	—	—
Television	3-7	TV-Y or TV-G	Portrayal of violence, offensive language, fear-producing scenes	0.50
	8-12	TV-Y, TV-Y7, TV-G, or TV-PG	Offensive language, illegal or harmful behavior, fear-producing scenes, sexual content	0.73
	13-17	TV-Y, TV-Y7, TV-G, TV-PG, or TV-14	Illegal or harmful behavior, offensive language, fear-producing scenes, sexual content	0.60
Video and computer games	3-7	E	Amount of violence, illegal or harmful behavior, offensive language	1.00
	8-12	E	Illegal or harmful behavior, portrayal of violence, sexual content	0.87
	13-17	E or T	Amount of violence, sexual content, fear-producing scenes	0.77

— indicates no significant predictors.

Authority

From their inception in the movie industry, ratings have been implemented on a voluntary basis. The combination of industry and public pressures to use ratings has encouraged the makers of media products to use the ratings to label their products. In recent years, however, the economic stakes seem to have changed. The competition for the public's eye and wallet has sharpened considerably. The economic temptations to down rate a product to capture a larger audience have increased, and, at the same time, each passing season encourages producers to outdo the previous season in edgy material—with more violence, more sexual situations, and more adult language. The time has come for ratings to move beyond the voluntary arena. An external rating board with authority to assign and/or approve ratings grows increasingly necessary each year.

Short-Term Tactics

Long-term solutions may take many months or years to implement. In the interim, parents and physicians need short-term tactics to guide them in using the existing imperfect ratings systems.

Education

Continued efforts at educating the public and the medical community about the ratings systems are a must. Educational efforts should include awareness of the existing systems and the ratings used in each of the systems. At the same time, parents and physicians should be made aware of the dialogue surrounding the development and continued evolution of these systems. They must realize that a rating is not a seal of approval, and that they should continue to monitor their children's use of media products, even if the rating suggests that the products are age-appropriate. At the same time, educational efforts should seek to involve parents and physicians in the process of reinventing ratings as outlined above.

Research

Research efforts have enabled us to understand the shortfalls of the current systems, but that work is far from done. Efforts to understand the impact of violence, sexual content, and adult language on children's health must be continued, along with monitoring of rated and unrated products as they are released.

The health care community has already expended a great deal of time, expertise, and energy advocating for strategies that would reduce the harmful effects of media on children. The success of those efforts, however, is significantly diminished if the system used for rating products is invalid. With questionable validity, 1 of 2 results will occur. Parents will lose trust in the ratings and, therefore, will be reluctant to use them, or they will use them, but children will continue to be exposed to harmful material. Under both scenarios, the goal of the entire effort is undermined.

ACKNOWLEDGMENTS

This work was funded in part by Aid Association for Lutherans, a fraternal benefit organization based in Appleton, Wisconsin, and by Fairview Health Services, Minneapolis, Minnesota.

We thank Marilyn VanOverbeke and Robin Livingston-Richter for managing the data collection, Robin Neidorf for assistance in preparing this manuscript, and 2 anonymous reviewers for their helpful comments.

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