



Policy Statement—Impact of Music, Music Lyrics, and Music Videos on Children and Youth

abstract

Music plays an important role in the socialization of children and adolescents. Popular music is present almost everywhere, and it is easily available through the radio, various recordings, the Internet, and new technologies, allowing adolescents to hear it in diverse settings and situations, alone or shared with friends. Parents often are unaware of the lyrics to which their children are listening because of the increasing use of downloaded music and headphones. Research on popular music has explored its effects on schoolwork, social interactions, mood and affect, and particularly behavior. The effect that popular music has on children's and adolescents' behavior and emotions is of paramount concern. Lyrics have become more explicit in their references to drugs, sex, and violence over the years, particularly in certain genres. A teenager's preference for certain types of music could be correlated or associated with certain behaviors. As with popular music, the perception and the effect of music-video messages are important, because research has reported that exposure to violence, sexual messages, sexual stereotypes, and use of substances of abuse in music videos might produce significant changes in behaviors and attitudes of young viewers. Pediatricians and parents should be aware of this information. Furthermore, with the evidence portrayed in these studies, it is essential for pediatricians and parents to take a stand regarding music lyrics. *Pediatrics* 2009;124:1488–1494

INTRODUCTION

Music plays an important role in the socialization of children and adolescents.^{1–3} Listening to popular music is considered by society to be a part of growing up.² Music provides entertainment and distraction from problems and serves as a way to relieve tension and boredom. Some studies have reported that adolescents use popular music to deal with loneliness and to take control of their emotional status or mood.^{2,4} Music also can provide a background for romance and serve as the basis for establishing relationships in diverse settings.² Adolescents use music in their process of identity formation,^{4–11} and their music preference provides them a means to achieve group identity and integration into the youth culture.^{5,7–9,12,13} Some authors have suggested that popular music provides adolescents with the means to resolve unconscious conflicts related to their particular developmental stage^{2,7,12,14} and that their music preference might reflect the level of turmoil of this stage.^{14–17}

Adolescents' choice of music and their reactions to and interpretations of it vary with age, culture, and ethnicity.^{2,13,14,18–25} Research has shown that

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KEY WORDS

music, lyrics, music videos, adolescents, violence

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there also is a difference in these variables between the genders.²⁵ Female adolescents are more likely than male adolescents to use music to reflect their emotional state, in particular when feeling lonely or “down.”^{2,26,27} Male adolescents, on the other hand, are more likely to use music as a stimulant, as a way to “boost” their energy level, or to create a more positive image of themselves.^{2,4,26}

To understand the importance of music in the life of adolescents, a survey performed in the early 1990s of 2760 American adolescents aged 14 through 16 years revealed that they listened to music an average of 40 hours per week.²⁸ In another study in 2000, North et al⁴ found that a sample of 2465 adolescents in England reported listening to music for an average of 2.45 hours per day. On a study performed in 2005 to assess media use of 8- to 18-year-olds in the United States, Roberts et al²⁵ reported that on a given day, 85% of 8- to 18-year-olds listen to music. Although time devoted to listening to music varies with age group, American youth listen to music from 1.5 to 2.5 hours per day. Still, a study performed with a small sample of at-risk youth revealed an average of up to 6.8 hours of music-listening per day.²⁹ Furthermore, Roberts et al found that 33% of those listening to music did so while performing other tasks or activities. These data support the idea that the prevalence of music-listening in adolescents may be even higher than that of television viewing. The reason for this is that popular music is present almost everywhere, from the supermarket to the mall, often as background music. It also is easily available through the radio, various recordings, the Internet, and new technologies,^{11,25} allowing adolescents to hear it in diverse settings and situations, alone or shared with friends.

Adolescents are not the only young consumers of popular music. A study

with 100 fourth- through sixth-graders revealed that 98% of these children listened to popular music, 72% of them on “most days” or every day.³⁰ Furthermore, it has been reported that children 8 to 10 years of age listen to music an average of 1 hour per day.²⁵ With many children and adolescents listening on iPods or other devices using headphones, parents may have little knowledge of what their children are listening to.

Research on popular music has explored several areas such as its effects on schoolwork,³¹ social interactions, mood and affect,^{20,26,27,32,33} and particularly behavior.^{10,11,34–36} Several theories have been developed to explain the relationship between music and behavior,^{15,37,38} and a number of studies have demonstrated that there is a relationship between music and emotions, regardless of age.^{20,23,27,39–41} Although the emotional response to music depends on the way it is presented, it is also true that it is closely related to the age of the listener and the experiences or preconceived ideas they bring to the music.^{2,14,39} The effect that popular music has on children’s and adolescents’ behavior and emotions is of paramount concern.⁴⁰ There is particular concern related to the lyrics of some genres of music and their effect on children and adolescents.^{3,10,11,42–45}

Lyrics have become more explicit in their references to drugs, sex, and violence over the years.¹¹ A content analysis of the top 10 CDs performed by the National Institute on Media in 1999 revealed that each of these CDs included at least 1 song with sexual content. Forty-two percent of the songs on these CDs contained very explicit sexual content.⁴⁶ Lyrics of some music genres, such as rock, heavy metal, rap, and new emerging genres such as reggaeton, have been found to revolve around topics such as sexual promis-

cuity, death, homicide, suicide, and substance abuse.^{9,13,17,43,45,46–53} Most recently, some rap music has been characterized by the presence of explicit sexual language in its lyrics as well as messages of violence, racism, homophobia, and hatred toward women.^{9,10,42,54} Drug, tobacco, and alcohol use also tend to be glorified in these songs.

In refuting concerns about the effect of lyrics, some have argued that children and adolescents use music only for entertainment, that little or no attention is paid to the words, and if any attention is given, understanding tends to be limited and related to the experiences lived by the listener.^{32,55} However, other studies have demonstrated the contrary.⁵⁶ Approximately 17% of male adolescents and 25% of female adolescents expressed that they liked their favorite songs specifically because the lyrics were a reflection of their feelings.² Also, it has been found that the more importance adolescents give to a certain type of music, the more attention they will pay to the lyrics.^{2,55,57,58} Furthermore, Knobloch-Westerwick et al have stated that although young listeners might not understand all the details in lyrics, they recognize enough to obtain a general idea of the message they bring.¹¹

Regarding the effects of popular music on behavior, several studies have demonstrated that preference for certain types of music could be correlated or associated with certain behaviors,* such as the association of drug and alcohol use with “rave” music or electronic music dance events.^{13,50,51,62} Roberts et al³⁹ performed a study in 1997 at an adolescent clinic, and their results suggested that probably the best predictor of risk in adolescents related to music is their self-report of negative feelings or emotions when listening to any type of music. The au-

*Refs 2, 10, 17, 29, 37, 39, 42, and 59–65.

thors of that study described an association between negative emotional response to music and risk-taking behaviors and even suggested that what triggers risky behavior in some adolescents is the negative emotional response rather than the type of music. Scheel and Westefeld⁶¹ supported this suggestion in 1999. Heavy metal and some rock music have been associated in some studies with an increased risk of suicide.^{17,61,63,66,67} Fans of heavy metal music have been reported in the literature to have more problems with school authorities and teachers than students who are not fans of that type of music.² Heavy metal music-listening has also been associated with increased depression, delinquency risk behavior,^{63–65} smoking, and conduct problems.⁶⁰ Fans of heavy metal and rap music showed a greater tendency to engage in reckless behavior than their peers who were not fans of those types of music.^{2,14,37,68} A study performed to explore the possible effect of heavy metal music containing either sexually violent or nonviolent lyrics on males' attitudes toward women revealed that those exposed to heavy metal music, with either sexually violent or nonviolent lyrics, showed significantly more negative stereotyped attitudes toward women than those in a group instead exposed to classical music.^{2,69} Likewise, in a study performed by Fischer and Greitemeyer,⁴² men who listened to misogynistic lyrics showed increased aggressive responses toward women as well as a more negative perception of them.

In a study in which adolescents who preferred heavy metal and rap music were compared with those who preferred other types of music, results indicated that the former consistently showed below-average current and elementary school grades, with a history of counseling in elementary school for academic problems.¹⁴ A study per-

formed in 1999 with a sample of 345 mothers from public schools revealed that 47% of the mothers believed that violent messages in rap music contribute to school violence⁷⁰; yet, according to a 2007 report from the Kaiser Family Foundation on parents, children, and the media,⁴⁴ only 9% of parents revealed being concerned about inappropriate content in music.

The preference for heavy metal music, rap, and associated genres among adolescents must alert us to an increased vulnerability and tendency toward risky behaviors. Adolescents at risk and with a feeling of alienation because of previous failures or problems tend to prefer these types of music, which might reflect their pessimistic view of life and the world.^{2,9,14,17,19,37,71} Correlational studies, however, have inherent limitations and cannot identify cause-and-effect relationships, but the associations reflect the status of the current research.

Research related to music and its effects on children and adolescents has been expanded into another expression of popular music: the music video. Music videos are appealing to children and adolescents. Considering that music videos mix 2 media that are attractive to youth (television and popular music), it is important to study their effects on a young audience and to be concerned about the messages these music videos promote.^{30,72} Music videos have been widely studied.^{29,30,55,72–93} They are mainly classified as either performance or concept videos. For a performance video, an artist or a group is filmed during a performance, usually a concert. Concept videos, on the other hand, tell the viewer a story that may or may not evolve from the song. This story may sometimes add content to the lyrics and provide a particular interpretation that is reinforced every time the viewer hears the song.^{72,73,75} As with popular music, the

perception and the effect of music-video messages on children and adolescents is related to the age and developmental and emotional stage of the viewer, as well as the level of exposure.

The prevalence of music-video-watching has been studied in both the United States and Europe.^{30,79,90,92,94} A study of 100 fourth- to sixth-graders revealed that 75% of them watched music videos, with 60% of them self-describing their frequency of viewing videos as either “pretty much” or “a lot.” Of these children, 62% watched music videos either “most days” or “every day,” and 7% watched them even before going to school.³⁰ In 2003, a report of the Kaiser Family Foundation⁹⁰ revealed that 3 of 4 of those in the 16- to 24-year-old group watch MTV, 58% watch it at least once a week, and 20% watch it for an hour or more every day. More recently, a study revealed that a sample of 12- to 15-year-olds watched music videos on an average of 4.3 days per week.⁹²

Research on music videos has been focused mainly on content analyses. A study published in 1997 by DuRant et al^{76,82} described an analysis of 518 music videos on 4 television networks (MTV, VH1, CMT, and BET). This study revealed that the percentage of violence in music videos ranged from 11.5% to 22.4%, with the most violent videos having been presented on MTV. When analyzed according to type of music, rap videos had the highest portrayal of violence (20.4%), closely followed by rock videos (19.8%). Using the same sample, another study revealed that although the percentage of videos that portrayed alcohol use showed no significant differences among networks, the percentage portrayed was still significant, ranging from 18.7% to 26.9%. Of the networks, MTV had the highest percentage of alcohol representation and also the

highest percentage of videos that portrayed smoking behaviors (25.7%). Of these videos, rap music videos showed a higher content of alcohol or tobacco use than did other types of videos.⁷⁵ In 1998, Rich et al⁸² reported on the findings of content analyses that looked for gender or race differences in aggressors or victims of acts of violence portrayed in the same sample of 518 music videos. The analyses showed that black individuals were overrepresented as aggressors (25%) and as victims (41%), compared with the percentage of black individuals in the general population (12%). Studies performed by Smith and Boyson in 2002⁹³ and Gruber et al in 2005⁹¹ validated these findings.

Analysis of the content in music videos is important, because research has reported that exposure to violence, sexual messages, sexual stereotypes, and use of substances of abuse in music videos might produce significant changes in behaviors and attitudes of young viewers.† Frequent watching of music videos has been related to an increased risk of developing beliefs in false stereotypes and an increased perceived importance of appearance and weight in adolescent girls.⁸³ In studies performed to assess the reactions of young males exposed to violent rap music videos or sexist videos, participants reported an increased probability that they would engage in violence, a greater acceptance of the use of violence, and a greater acceptance of the use of violence against women than did participants who were not exposed to these videos.^{29,35,77,78,92}

In 1999 Kalof⁸⁴ reported that college students who were exposed to videos with stereotyped sexual images showed more acceptance of adversarial relationships than those who were not exposed. Kaestle et al⁹² reported in 2007 that in a group

of seventh- and eighth-grade boys, watching music videos and professional wrestling was associated with an increased acceptance of date rape. A survey performed among 214 adolescents revealed that there was an association between music-video-watching and permissive sexual behaviors.⁷⁶ It has also been reported that after watching MTV, adolescents' attitudes were more accepting of premarital sex.^{52,53,80} A survey performed among 2760 American adolescents demonstrated that listening to music and watching television and music videos more frequently was associated with increased risky behaviors⁶⁸ and alcohol use^{85,86}; these results were validated by van den Bulck and Beullens,⁹⁴ who demonstrated a longitudinal relationship between adolescents' exposure to music videos and alcohol use while going out to a bar, party, disco, etc. In 2003, Wingwood et al⁸⁹ reported on a study in which 522 black female adolescents with a median exposure to rap music videos of 14 hours per week were followed for 12 months. After controlling for all the covariates, greater exposure to rap music videos was independently associated with a wide variety of risky behaviors such as increased promiscuity and use of drugs and alcohol, among others. Of importance, a study performed by Austin et al⁹⁸ in 2000 revealed that the potential risks of exposure to music videos can be moderated by parental reinforcement and counterreinforcement of conducts observed.

RECOMMENDATIONS

The American Academy of Pediatrics understands that, given the findings presented and our knowledge of child and adolescent development, pediatricians and parents should be aware of this information. Furthermore, with the evidence portrayed in these studies, it is essential for pediatricians and parents to take a stand regarding this

issue. Therefore, the following recommendations are made.

1. Pediatricians should become familiar with the role of music in the lives of children and adolescents and identify music preferences of their patients as clues to emotional conflict or problems.⁹⁹
2. Pediatricians should become familiar with the literature available on the effects of music and music videos on children and adolescents.^{36,38,100–103}
3. Pediatricians should explore with patients and their parents what types of music they listen to and music videos they watch and under which circumstances they consume these media.
4. Pediatricians should encourage parents to take an active role in monitoring the type of music to which their children and adolescents are exposed and to be aware of the music they purchase.^{104–106} Parents can find lyrics by typing "music lyrics" into an Internet search engine and accessing 1 or more of the Web sites that appear. Pediatricians also should counsel parents and caregivers to monitor and regulate television-viewing according to the age and maturity of their children and adolescents.
5. Pediatricians should encourage parents and caregivers to become media literate.
6. Pediatricians should sponsor and participate in local and national coalitions to discuss the effects of music on children and adolescents to make the public and parents aware of sexually explicit, drug-oriented, or violent lyrics on CDs and cassettes, in music videos, on the Internet, and in emerging technologies.
7. The public, and parents in particular, should be aware of and use

†Refs 29, 35, 52, 53, 68, 72, 76–78, 80, 85, 89, 92 and 94–97.

the music industry's parental advisory warning of explicit content. The advisory label is a black-and-white logo and should be located on the front of the CD, cassette, album, videocassette, or DVD. It may help protect children from certain offensive materials.

8. Performers should serve as positive role models for children and teenagers.
9. The music-video industry should produce videos with more positive themes about relationships, racial harmony, drug avoidance, nonviolent conflict resolution, sexual ab-

stinence, pregnancy prevention, and avoidance of promiscuity.

10. Further research on the effects of popular music, lyrics, and music videos on children and adolescents is important and should be conducted.¹⁰⁷

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REFERENCES

1. Roe K. Swedish youth and music: listening patterns and motivations. *Communic Res.* 1985;12(3):353–362
2. Roberts DF, Christensen PG. Popular music in childhood and adolescence. In: Singer DG, Singer JL, eds. *Handbook of Children and the Media*. Thousand Oaks, CA: Sage Publications; 2001:395–410
3. Leming JS. Rock music in the socialization of moral values in early adolescence. *Youth Soc.* 1987;18(4):363–383
4. North AC, Hargreaves DJ, O'Neill SA. The importance of music to adolescents. *Br J Educ Psychol.* 2000;70(pt 2):255–272
5. Chapman AJ, Williams AR. Prestige effects and aesthetic experiences: adolescents' reactions to music. *Br J Soc Clin Psychol.* 1976; 15(1):61–72
6. Seelow D. Listening to youth: Woodstock, music, America, and Kurt Cobain's suicide. *Child Youth Care Forum.* 1996;25(1):49–60
7. Rosenblum DS, Daniolos P, Kass N, Martin A. Adolescents and popular culture: a psychodynamic overview. In: Solnit AJ, Neubauer PB, Abrams S, Dowling AS, eds. *The Psychoanalytic Study of the Child*. CT: Yale University Press; 1999:319–338Vol 54. New Haven
8. Tarrant M, North AC, Hargreaves DJ. Social categorization, self-esteem, and the estimated musical preferences of male adolescents. *J Soc Psychol.* 2001;141(5):565–581
9. Reddick BH, Beresin EV. Rebellious rhapsody: metal, rap, community and individuation. *Acad Psychiatry.* 2002;26(1):51–59
10. Martino SC, Collins RL, Elliot MN, Strachman A, Kanouse DE, Berry SH. Exposure to degrading versus nondegrading music lyrics and sexual behavior among youth. *Pediatrics.* 2006;118(2). Available at: www.pediatrics.org/cgi/content/full/118/2/e430
11. Knobloch-Westerwick S, Musto P, Shaw K. Rebellion in the top music charts: defiant messages in rap/hip hop and rock music—1993–2003. Presented at: the International Communication Association Conference; Dresden, Germany, June 19–23, 2006
12. Clarke P. Teenagers' co-orientation and information-seeking about pop music. *Am Behav Sci.* 1973;16(4):551–566
13. Diamond S, Bermudez R, Schensul J. What's the rap about ecstasy? Popular music lyrics and drug trends among American youth. *J Adolesc Res.* 2006;21(3):269–298
14. Took KJ, Weiss DS. The relationship between heavy metal and rap music and adolescent turmoil: real or artifact? *Adolescence.* 1994; 29(115):613–621
15. Chapin JR. Adolescent sex and mass media: a developmental approach. *Adolescence.* 2000; 35(140):799–811
16. Villani S. Impact of media on children and adolescents: a 10-year review of the research. *J Am Acad Child Adolesc Psychiatry.* 2001;40(4):392–401
17. North AC, Hargreaves DJ. Problem music and self-harming. *Suicide Life Threat Behav.* 2006;36(5):582–590
18. Denisoff RS. Youth and popular music: test of taste culture hypothesis. *Youth Soc.* 1972; 4(2):237–255
19. Epstein JS, Pratto DJ, Skipper JK. Teenagers, behavioral problems and preferences for heavy metal and rap music: a case study of a southern middle school. *Deviant Behav.* 1990; 11(4):381–394
20. Hakanen EA. Emotional use of music by African American adolescents. *Howard J Commun.* 1995;5(3):214–222
21. Roe K. Adolescents' media use: a European view. *J Adolesc Health.* 2000;27(2 suppl): 15–21
22. O'Connor LA, Brooks-Gunn J, Graber J. Black and white girls' racial preferences in media and peer choices and the role of socialization for black girls. *J Fam Psychol.* 2000;14(3): 510–521
23. Crust L, Clough PJ. The influence of rhythm and personality in the endurance response to motivational asynchronous music. *J Sports Sci.* 2006;24(2):187–195
24. Recording Industry Association of America. *Market Data on Hispanic Consumers and Pre-recorded Music*. Washington, DC: Recording Industry Association of America; 1999. Available at: www.riaa.com/newsitem.php?news_year_filter=1999&resultpage=&id=9D438995-0F74-BCF4-63F8-5C3920048218. Accessed December 10, 2007
25. Roberts DF, Foehr UG, Rideout V. *Generation M: Media in the Lives of 8–18 Year-Olds*. Menlo Park, CA: Henry J. Kaiser Family Foundation; 2005. Available at: www.kff.org/entmedia/7251.cfm. Accessed December 10, 2007
26. Wells A, Hakanen EA. The emotional use of popular music by adolescents. *Journal Q.* 1991;68(3):445–454
27. Gibson R, Aust CF, Zillmann D. Loneliness of adolescents and their choice and enjoyment of love-celebrating versus love-lamenting popular music. *Empir Stud Arts.* 2000;18(1): 43–48
28. American Academy of Pediatrics, Com-

- mittee on Communications. Impact of music lyrics and music videos on children and youth. *Pediatrics*. 1996;98(6 pt 1):1219–1221
29. Ward LM, Hansbrough E, Walker E. Contributions of music videos exposure to black adolescents' gender and sexual schemas. *J Adolesc Res*. 2005;20(2):143–166
 30. Christenson P. Preadolescent perceptions and interpretations of music videos. *Pop Music Soc*. 1992;16(3):63–74
 31. La Voie JC, Collins BR. Effect of youth culture music on high school students' academic performance. *J Youth Adolesc*. 1975;4(1):57–65
 32. Sousou SD. Effects of melody and lyrics on mood and memory. *Percept Mot Skills*. 1997;85(1):31–40
 33. Burns JL, Labbe E, Arke B, et al. The effects of different types of music on perceived and physiological measures of stress. *J Music Ther*. 2002;39(2):101–116
 34. Anderson CA, Carnagey NL, Eubanks J. Exposure to violent media: the effects of songs with violent lyrics in aggressive thoughts and feelings. *J Pers Soc Psychol*. 2003;84(5):960–971
 35. Bushman BJ, Huesmann LR. Short-term and long-term effects of violent media on aggression in children and adults. *Arch Pediatr Adolesc Med*. 2006;160(4):348–352
 36. Hogan MJ. Adolescents and media violence: six crucial issues for practitioners. *Adolesc Med Clin*. 2005;16(2):249–268, vii
 37. Gardstrom SC. Music exposure and criminal behavior: perceptions of juvenile offenders. *J Music Ther*. 1999;36(3):207–221
 38. Strasburger VC. Risky business: what primary care practitioners need to know about the influence of the media on adolescents. *Prim Care Clin Off Pract*. 2006;33(2):317–348
 39. Roberts KR, Dimsdale J, East P, Friedman L. Adolescent emotional response to music and its relationship to risk-taking behaviors. *J Adolesc Health*. 1998;23(1):49–54
 40. Strasburger VC. Adolescents, sex, and the media: oooh, baby, baby—a Q & A. *Adolesc Med Clin*. 2005;16(2):269–288, vii
 41. Field T, Martínez A, Nawrocki T, Pickens J, Fox NA, Schanberg S. Music shifts frontal EEG in depressed adolescents. *Adolescence*. 1998;33(129):109–116
 42. Fischer P, Greitemeyer T. Music and aggression: the impact of sexual-aggressive song lyrics on aggression-related thoughts, emotions, and behavior toward the same and opposite sex. *Pers Soc Psychol Bull*. 2006;32(9):1165–1176
 43. Herd D. Changes in the prevalence of alcohol use in rap song lyrics, 1979–1997. *Addiction*. 2005;100(9):1258–1269
 44. Henry J. Kaiser Family Foundation. *Parents, Children & Media: A Kaiser Family Foundation Survey*. Menlo Park, CA: Henry J. Kaiser Family Foundation; 2007. Available at: www.kff.org/entmedia/upload/7638.pdf. Accessed December 10, 2007
 45. Brookshire T, Davis C, Stephens E, Bryant S. Substance use references in the lyrics of favorite songs of African-American adolescents. *J Young Investig*. 2003;8(1). Available at: www.jyi.org/volumes/volume8/issue1/articles/brookshire.html. Accessed December 10, 2007
 46. Gentile DA. *Teen-Oriented Radio and CD Sexual Content Analysis*. Minneapolis, MN: National Institute of Media and the Family; 1999. Available at: www.mediafamily.org/research/report_radioccontentanalysis.pdf. Accessed December 10, 2007
 47. Plopper BL, Ness ME. Death as portrayed to adolescents through top 40 rock and roll music. *Adolescence*. 1993;28(112):793–807
 48. Chen MJ, Miller BA, Grube JW, Waiters ED. Music substance use and aggression. *J Stud Alcohol*. 2006;67(3):373–381
 49. Bedi G, Redman J. Recreational ecstasy use: acute effects potentiated by ambient conditions? *Neuropsychobiology*. 2006;53(2):113
 50. Furr-Holden D, Voas RB, Kelley-Baker T, Miller B. Drug and alcohol-impaired driving among electronic music dance event attendees. *Drug Alcohol Depend*. 2006;85(1):83–86
 51. Chinet L, Stephan P, Zobel F, Halfon O. Party drug use in techno nights: a field survey among French-speaking Swiss attendees. *Pharmacol Biochem Behav*. 2007;86(2):284–289
 52. Brown JD, L'Engle KL, Pardum CJ, Guo GJ, Kenneavy K, Jackson C. Sexy media matter: exposure to sexual content in music, movies, television, and magazines predicts black and white adolescents' sexual behavior. *Pediatrics*. 2006;117(4):1018–1027
 53. L'Engle KL, Brown JD, Kenneavy K. The mass media are an important context for adolescents' sexual behavior. *J Adolesc Health*. 2006;38(3):186–192
 54. Segal D. Grammy's discordant note. *The Washington Post*. January 5, 2001:A01
 55. Greenfield PM, Bruzzone L, Koyamatsu K, et al. What is rock music doing to the minds of our youth? A first experimental look at the effects of rock music lyrics and music videos. *J Early Adolesc*. 1987;7(3):315–329
 56. Wass H, Raup JL, Cerullo K, Martel LG, Mingione LA, Sperring AM. Adolescents' interest in and views of destructive themes in rock music. *Omega*. 1989/1988;19(3):177–186
 57. Arnett J. Adolescents and heavy metal music: from the mouths of metalheads. *Youth Soc*. 1991;23(1):76–98
 58. Kilgour AR, Jakobson LS, Cuddy LL. Music training and rate of presentation as mediators of text and song recall. *Mem Cognit*. 2000;28(5):700–710
 59. Forsyth AJ, Barnard M, McKeganey NP. Musical preference as an indicator of adolescent drug use. *Addiction*. 1997;92(10):1317–1325
 60. Pedersen W, Skrandal A. Ecstasy and new patterns of drug use: a normal population study. *Addiction*. 1999;94(11):1695–1706
 61. Scheel KR, Westefeld JS. Heavy metal music and adolescent suicidality: an empirical investigation. *Adolescence*. 1999;34(134):253–273
 62. Weir E. Raves: a review of the culture, the drugs, and the prevention of harm. *CMAJ*. 2000;162(13):1843–1848
 63. Martin G, Clarke M, Pearce C. Adolescent suicide: music preference as an indicator of vulnerability. *J Am Acad Child Adolesc Psychiatry*. 1993;32(3):530–535
 64. Wass H, Miller MD, Redditt CA. Adolescents and destructive themes in rock music: a follow up. *Omega*. 1991;23(3):199–206
 65. Arnett J. Heavy metal and reckless behavior among adolescents. *J Youth Adolesc*. 1991;20(6):573–592
 66. Litman RE, Farberow NL. Pop-rock music as precipitating cause in youth suicide. *J Forensic Sci*. 1994;39(2):494–499
 67. Burge M, Goldblat C, Lester D. Music preferences and suicidality: a comment on Stack. *Death Stud*. 2002;26(6):501–504
 68. Klein JD, Brown JD, Childers KW, Olivieri J, Porter C, Dykers C. Adolescents' risky behavior and mass media use. *Pediatrics*. 1993;92(1):24–31
 69. St Lawrence JS, Joyner DJ. The effects of sexually violent rock music on males' acceptance of violence against women. *Psychol Women Q*. 1991;15(1):49–63
 70. Kandakai TL, Price JH, Telljohann SK, Wilson CA. Mothers' perception of factors influencing violence in schools. *J Sch Health*. 1999;69(5):189–195
 71. Roberts DF, Henriksen L, Christenson PG. *Substance Use in Popular Movies and Music*. Washington, DC: National Youth Anti-Drug Media Campaign, Office of National Drug Control Policy, and Department of Health and Human Services, Substance Abuse and Mental Health Services Administration; 1999
 72. Ashby SL, Rich M. Video killed the radio star: the effects of music videos on adolescent health. *Adolesc Med Clin*. 2005;16(2):371–393, ix

73. Willis E, Strasburger VC. Media violence. *Pediatr Clin North Am*. 1998;45(2):319–331
74. Kubey R, Larson R. The use and experience of the new video media among children and young adolescents. *Communic Res*. 1990;17(1):107–130
75. DuRant RH, Rome ES, Rich M, Allred E, Emans SJ, Woods ER. Tobacco and alcohol use behaviors portrayed in music videos: a content analysis. *Am J Public Health*. 1997;87(7):1131–1135
76. Strouse JS, Buerkel-Rothfuss N, Long EC. Gender and family as moderators of the relationship between music video exposure and adolescent sexual permissiveness. *Adolescence*. 1995;30(119):505–521
77. Johnson JD, Jackson LA, Gatto L. Violent attitudes and deferred academic aspirations: deleterious effects of exposure to rap music. *Basic Appl Soc Psych*. 1995;16(1–2):27–41
78. Johnson JD, Adams MS, Ashburn L, Reed W. Differential gender effects of exposure to rap music on African American adolescents' acceptance of teen dating violence. *Sex Roles*. 1995;33(7–8):597–605
79. Roe K, Cammaer G. Delivering the young audience to advertisers: music television and Flemish youth. *Communications*. 1993;18(2):169–177
80. Greeson LE, Williams RA. Social implications of music videos for youth: an analysis of the content and effects of MTV. *Youth Soc*. 1986;18(2):177–189
81. DuRant RH, Rich M, Emans SJ, Rome ES, Allred E, Woods ER. Violence and weapon carrying in music videos: a content analysis. *Arch Pediatr Adolesc Med*. 1997;151(5):443–448
82. Rich M, Woods ER, Goodman E, Emans SJ, DuRant RH. Aggressors or victims: gender and race in music video violence. *Pediatrics*. 1998;101(4 pt 1):669–674
83. Borzekowski DL, Robinson TN, Killen JD. Does the camera add 10 pounds? Media use, perceived importance of appearance, and weight concerns among teenage girls. *J Adolesc Health*. 2000;26(1):36–41
84. Kalof L. The effects of gender and music videos imagery on sexual attitudes. *J Soc Psychol*. 1999;139(3):378–385
85. Robinson TN, Chen HL, Killen JD. Television and music video exposure and risk of adolescent alcohol use. *Pediatrics*. 1998;102(5). Available at: www.pediatrics.org/cgi/content/full/102/5/e54
86. Strasburger VC. Alcohol advertising and adolescents. *Pediatr Clin North Am*. 2002;49(2):353–376, vii
87. Rustad RA, Small JE, Jobes DA, Safer MA, Peterson RJ. The impact of rock videos and music with suicidal content on thoughts and attitudes about suicide. *Suicide Life Threat Behav*. 2003;33(2):120–131
88. Strasburger VC, Hendren RL. Rock music and music videos. *Pediatr Ann*. 1995;24(2):97–103
89. Wingood GM, DiClemente RJ, Bernhart JM, Harrington K, Davies SL, Hook EW III. A prospective study of exposure to rap music videos and African American female adolescents' health. *Am J Public Health*. 2003;93(3):437–439
90. Henry J. Kaiser Family Foundation. Reaching the MTV generation: recent research on the impact of the Kaiser Foundation/MTV public education campaign on sexual health. Available at: www.kff.org/entmedia/Reaching-the-MTV-Generation-Report.cfm. Accessed December 10, 2007
91. Gruber EL, Thau HM, Hill DL, Fisher DA, Gruber JW. Alcohol, tobacco and illicit substances in music videos: a content analysis of prevalence and genre. *J Adolesc Health*. 2005;37(1):81–83
92. Kaestle CE, Halpern CT, Brown JD. Music videos, pro wrestling and acceptance of date rape among middle school males and females: an exploratory analysis. *J Adolesc Health*. 2007;40(2):185–187
93. Smith SL, Boyson AR. Violence in music videos: examining the prevalence and context of physical aggression. *J Commun*. 2002;52(1):61–83
94. van den Bulck J, Beullens K. Television and music video exposure, and adolescent alcohol use while going out. *Alcohol Alcohol*. 2005;40(3):249–253
95. Hansen CH, Hansen RD. How rock music videos can change what is seen when boy meets girl: priming stereotypic appraisal of social interactions. *Sex Roles*. 1998;19(5–6):287–316
96. Tucker JB, Barone JE, Stewart J, Hogan RJ, Sarnelle JA, Blackwood MM. Violence prevention: reaching adolescents with the message. *Pediatr Emerg Care*. 1999;15(6):436–439
97. Kronenberger WG, Mathews VP, Dunn DW, et al. Media violence exposure and executive functioning in aggressive and control adolescents. *J Clin Psychol*. 2005;61(6):725–737
98. Austin EW, Pinkleton BE, Fujioka Y. The role of interpretation processes and parental discussion in the media's effects on adolescents' use of alcohol. *Pediatrics*. 2000;105(2):343–349
99. Brown EF, Hendee WR. Adolescents and their music. *JAMA*. 1989;262(12):1659–1663
100. Strasburger VC, Donnerstein E. Children, adolescents, and the media: issues and solutions. *Pediatrics*. 1999;103(1):129–139
101. Rich M, Bar-on M. Child health in the information age: media education of pediatricians. *Pediatrics*. 2001;107(1):156–162
102. American Academy of Pediatrics, Committee on Public Education. Media education. *Pediatrics*. 1999;104(2 pt 1):341–343
103. American Academy of Pediatrics, Committee on Public Education. Children, adolescents, and television. *Pediatrics*. 2001;107(2):423–426
104. Federal Trade Commission. *Marketing Violent Entertainment to Children: A Review of Self-regulation and Industry Practices in the Motion Picture, Music Recording, and Electronic Games Industries*. Report of the Federal Trade Commission. Washington, DC: Federal Trade Commission; 2000
105. Christenson P. The effects of parental advisory labels on adolescent music preferences. *J Commun*. 1992;42(1):106–113
106. Federal Trade Commission. *Follow-up Report on Marketing of Violent Entertainment to Children*. Washington, DC: Federal Trade Commission; 2001
107. Escobar-Chaves SL, Tortolero SR, Markham CM, Low BJ, Eitel P, Thickstun P. Impact of the media on adolescent sexual attitudes and behaviors. *Pediatrics*. 2005;116(1):303–326