



Song lyrics, stress, and substance abuse in adolescents

In February, the *Archives of Pediatrics and Adolescent Medicine* published an analysis of song lyrics popular with adolescents that raises interesting questions about the roots of later substance abuse. Researchers at the University of Pittsburgh measured the frequency of references to substance use in music that adolescents are likely to listen to, based on the most popular songs in the youth market compiled by *Billboard* magazine. In explaining the rationale for their study, the researchers cite statistics showing just how saturated the ears of our children are with song lyrics. Nine of 10 children live in homes with some kind of music player. Almost as many have their own CD or MP3 player. Music is everywhere—and our children are listening, on average, more than two hours per day.

To analyze popular songs, the researchers made note of both explicit and implicit references to substance use (*not* substance abuse), along with any lyrics indicating motivations, associations, or consequences of that use.

The messages were common. About two-fifths of songs had some kind of reference to substance use, and a third of songs contained explicit references. Alcohol was most often referenced in songs, followed by marijuana. Some music genres were more likely to reference substance use than others. Rap music made the most references (in more than three-quarters of the songs) and pop music the least (about one in 10).

Supporting the notion that popular music glorifies substance use, the researchers found that two-thirds of the songs associated substance use with sexual, emotional, or financial gains rather than losses.

The significance of these findings is not clear. Do these references to substance use, particularly positive ones, increase the risk of substance abuse in the listeners? The authors recommend examining this question further for two reasons. They draw a parallel with other findings, particularly evidence that adolescents who view tobacco smoking on film are more

at risk for smoking themselves. The researchers also point out that many adolescents mimic the styles of their musical heroes.

Looking at the problem from another angle, a group of German researchers reported in the January 2008 issue of *Biological Psychiatry* that a gene involved in the human stress response may be associated with increased risk of adolescent substance abuse. This prospective, longitudinal study involved genotyping and collecting data on the life events and drinking patterns of 280 adolescents. The adolescents who had a combination of high stress plus genetic risk had higher lifetime rates of heavy drinking.

This study raises the hope that treatments targeting the stress response could reduce risk. But the German group reminds us that alcohol abuse is not a homogeneous disorder and that the relationship between genetic disposition and environmental influence cannot yet be sorted out.

And that is just the point that the lead author of the Pittsburgh study, Dr. Brian Primack, made in a radio interview in February (listen at www.wnyc.org/shows/soundcheck/episodes/2008/02/11). He points out that the music survey says nothing about cause and effect. For all we know, references to drug use in song lyrics are a useful outlet. As Ann Powers, a music critic at the *Los Angeles Times*, stated in the same radio show, popular music addresses subjects that aren't as easily addressed elsewhere in the culture.

Based on these studies, some parents may wish they could limit their children's exposure to music. While this impulse is understandable, it certainly isn't practical. Dr. Primack suggests an excellent alternative. Give young people the tools they need to analyze the messages in song lyrics. Well-educated children are more likely to make better choices about which influences to accept and which to reject.

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