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## Research Article

# Adolescents' perspectives on addiction: Qualitative study

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### Abstract

Given that the adolescence period is one of the most crucial stages of development during one's lifetime and adolescents are prone to engage in behaviors which may negatively impact their health, it is very important to have a clear and transparent understanding of adolescents' health needs and problems. A content analysis with a qualitative approach was conducted and 41 healthy adolescents were interviewed. The results of this study revealed the following themes: addiction causes and prevalence; unhealthy friendship and communication and increased rates of cigarette smoking; alcohol and drugs; barriers to and factors in addiction and health; family and addiction. The findings showed worrying attitudes of adolescents to addiction and its prevalence are alarming. It is concluded that exploring adolescents' perspectives is not only important but is useful for maintaining a healthy society, and thus policy makers should develop effective prevention and intervention programs based on these themes.

### Key words

addiction, adolescent, content analysis, qualitative approach.

## INTRODUCTION

Adolescence is a time of ferment, turmoil, confusion and creativity as well as a time of high energy and optimum health. Adolescents are often inclined to engage in behavior that impacts on their health status in a negative way (Spear & Kulbok, 2001), which may affect their lifestyle for the rest of their lives (Mayhew *et al.*, 2000). It is necessary to view the health issue from adolescents' perspective as the main health care receivers (customers). An interdisciplinary approach provides health and educational professionals with a better understanding of adolescents' health needs and problems. Efforts need to be made at all governmental levels to improve the health of adolescents, which will, in turn, reflect on their futures, families and communities.

Three million people die annually from cigarette smoking related disease and 50% of all regular cigarette smokers are predicted to die from it. These indi-

viduals have a potentially higher risk of adverse health outcomes compared to non-smokers (Unger & Chen, 1999). Up to 91% of adult cigarette smokers start smoking during adolescence (Rugkasa *et al.*, 2001) and more than half become regular smokers before they reach the age of 18 years (Rugkasa *et al.*, 2001; Brown, 2002). A worldwide increased rate of cigarette smoking, alcohol and drug use in adolescents makes it a critical issue in health promotion (Corbett, 2001; Rich & Ginsburg, 1999).

Geographically, Iran borders Afghanistan in the north-east, which is one of the main producers of opium in the region, and Turkey in the north-west which is one of the main entry points for illegal drugs and the main route into the European markets.

Iran pays a heavy price because of its geographic location and, every year, particularly in recent years, this country has spent millions of dollars combating drug trafficking and allocating a great deal of human resources towards confiscating and destroying illicit drugs. The armed forces in Iran, particularly the police, have lost thousands of its members in its efforts to fight and arrest drug traffickers.

As such, the prevalence of illicit drugs is the clear consequence of Iran's location in a region where drug

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production and transportation to other parts of the world constitutes a major business vital to the economy, particularly to that of Afghanistan.

Iran, with 15 million adolescents, has one of the youngest populations in the world. The health status of adolescents, specifically their psychological changes, combined with the evolving social trends creates a unique challenge for the youth. It is believed that some adolescents experience the transition to adulthood through experiencing the use (abuse) of illicit drugs, social isolation, suicide and depression. In a study in the city of Shiraz in south-eastern Iran that assessed chemical dependency, the results revealed that 25.4%, 9.6% and 3.5% of high school students used cigarettes, alcohol and opium, respectively (Ahmadi & Hasani, 2003).

There are few studies that have investigated addiction from the perspective of Iranian adolescents which can offer an adolescent-centered view and may allow better communication with the youth, to draw on their strengths, build on their idealism and guide them towards safer behaviors.

Therefore, the present paper examined adolescents, as a high risk group for addiction, and the very basic foundations of a society's perspectives on the issue of drug addiction.

## METHODOLOGICAL ISSUES

This paper is a part of a large grounded theory project about adolescents' health from which these data with regard to addiction were extracted and analyzed separately using a content analysis method. Adolescents' viewpoint about addiction included cigarette smoking, alcohol consumption and opium use.

### Setting and sample

Interviews were conducted with adolescents in Tehran (Iran) in a place of their preference (e.g. school, home, park) in a free and relaxed environment. Participants consisted of 41 adolescents aged 14–19 years. Purposeful sampling was used.

### Ethical considerations

Ethical issues (anonymity, informed consent, withdrawal from the study, recording permission) in this study were approved by the Research Committee at the Nursing Faculty of Tehran University of Medical Sciences. Prior to the study, the adolescents were informed verbally about the aim of the study and were asked to voluntarily participate. All participants were informed that if at any point during the

interview they wanted to quit the interview, they were free to do so.

If any participant asked for his/her audiotape, it was immediately given to him/her. Consent was also obtained from all school principals. Adolescents who decided to withdraw from the study (with transcripts' recheck) were permitted to do so. Tapes were erased for two adolescents who did not wish to participate in the study and three requested their tapes which were consequently given to them. To protect the privacy, confidentiality and the identity of the participants, interviews were conducted only with the participation of the interviewer and the interviewee. Emphasis was placed on creating a relaxed atmosphere, providing snacks and drinks and minimizing the presence of the recorder.

## METHODS

A qualitative approach was conducted to allow the researchers to learn about each adolescent's story. According to Strauss and Corbin (1998), a qualitative method is a suitable method for uncovering the nature of people's experiences and what lies behind them. This method is used for studying a phenomenon which little is known about.

One of the biggest advantages of a content analysis methodology is that it facilitates the production of core constructs from textual data through a systematic method of reduction and analysis. Qualitative content analysis elicits contextual meaning in context through the development of emerging themes.

Therefore, in the present study, a qualitative content analysis was used to analyze and derive themes from adolescents' responses. Participants were unique in their perspectives, which surpassed the social and developmental variables (Morse, 2002).

Following reading and re-reading of the transcripts, subthemes emerged and were then categorized and labeled as themes. This process progressed to a more detailed indexing. Following data reduction, constructs were formulated through a process of interpretation based on the contextual setting from which data were derived. The process of continual checking and questioning of emerging themes was continued until the same themes with those of repeated reading and analyzing emerged (Priest *et al.*, 2002).

### Data collection and analysis

Individual in-depth, open semistructured interviews were conducted. A form for demographic data and an interview guide with questions were used in the data collection process. Interviews were audiotaped and

lasted from 30 min to 3 h, over one to three sessions, and were subsequently transcribed and analyzed consecutively. Each interview transcribed initially was analyzed as a unit; our final categorization was based on all interviews' themes and was analyzed together as a whole. Furthermore, a constant comparison analysis was performed. Data were considered 'saturated' when no data could be identified and the category was coherent or made sense.

Analysis consisted of identifying, coding and summarizing the concepts and themes, consistent with established qualitative data analysis methods (Rugkasa *et al.*, 2001). The investigators reviewed each interview to identify subthemes and then comparisons between interviews and a list of common subthemes were compiled. These were categorized into larger themes. Transcripts of each interview were reviewed several times and the data were recategorized subsequently as themes were identified. The list of themes and subthemes were reviewed for completeness and accuracy. The adolescents, researchers and faculty members involved in the project had the opportunity to perform a member check of the transcripts, themes, subthemes, final themes and categorization.

Credibility was enhanced through member checking, validation of emerging themes in subsequent interview, and debriefing with two expert supervisors. Using adolescents' revision as a member check, prolonged engagement with participants, peer check and maximum variation of sampling has been used for validation and credibility of data (Streubert & Carpenter, 2003). To establish inter-transcripts reliability, a second review was conducted by six faculty members. Approximately 30% of all transcripts and themes were rechecked and 80% or more of the themes, subthemes and final categorization were the same in the second review.

## FINDINGS

Table 1 shows the demographic characteristics of the participants. As shown, 54% of the adolescents were male and 46% were female. The majority of adolescents (58%) were 17–19 years-old. In terms of education, 44% of adolescents had high school and 34% had secondary school education.

Content analysis of the transcripts revealed five main themes, each of which included two to seven subthemes (Table 2). Participants identified adolescents' causes of addiction as: 'being free and relaxed', 'gaining a sense of power and authority', 'lure of alcohol because it is forbidden and wishing to break the rules', 'curiosity and wishing to experience new sensations', and 'experiencing the benefits of alcohol'.

**Table 1.** Demographic characteristics of participants

Demographic characteristic	Number (%)
Sex	
Male	22 (54)
Female	19 (46)
Age range (years)	
11–13	6 (15)
14–16	11 (2)
17–19	24 (58)
Education level	
Secondary school	14 (34)
High school	18 (44)
University	5 (12)
Other	4 (10)
Total	41 (100)

**Table 2.** Emerging themes and subthemes

Causes of addiction:
Being free and relaxed
Gaining a sense of power and authority
Lure of alcohol because it is forbidden and wishing to break the rules
Curiosity and wishing to experience new sensations
Experiencing the benefits of alcohol
Increases in addiction rates:
Decrease in addiction onset age
Availability of drugs and obtaining them easily
Rapid change from the use of inhalants to injecting drugs
Unhealthy friendships and communication:
Role of friends in addiction
Increased use of drugs by adolescents in social places
Relationship between health and addiction:
Smoking as the main health barrier and beginning of addiction
Religious beliefs, exercise, self-esteem and knowledge are the main protective factors from addiction
Family:
Parents as their children's role models
Parental indifference
Hidden drug abuse

Participants revealed their concerns about 'increased addiction', which included the subthemes: 'decrease in addiction onset age', 'availability of drugs and obtaining them easily' and 'rapid change from the use of inhalants to injecting drugs'.

The third main emerging theme was 'unhealthy friendships and communication' with two subthemes which included 'effective friends' role in addiction' and 'increased use of drugs by adolescents in social places'.

According to the participants there was a relationship between health and addiction. This category

contained two subthemes: 'smoking as the main health barrier and start of addiction' and 'religious beliefs, exercise, self-esteem, knowledge about addiction'.

'Family' was the last main theme, which consisted of three subthemes: 'parents as their kids' role models', 'parents indifference' and 'hidden drug abuse'. The emerging main themes and subthemes are illustrated in Table 2.

## DISCUSSION

In general, qualitative research methods search for answers from the broader social context. The closer to the natural state in which health research data are collected, the fewer limitations exist in translating the finding into real-life applications (Rich & Ginsburg, 1999). Findings of the present study, derived from real adolescents' lives, indicate similar problems as shown in other studies consistent with the findings of Rugkasa *et al.* (2001). Interviewees pointed out high susceptibility of adolescents to cigarette smoking, alcohol and drug abuse. This is similar to the findings of other studies showing high prevalence of substance use in adolescents worldwide (Kodjo & Klein, 2002), use of illicit drugs and alcohol at an alarming rate (Brown, 2002), susceptibility to tobacco use at an early age (Corbett, 2001), and an increasing epidemic rate of teenage smoking (Johnson *et al.*, 2000; Piko, 2001).

These interviews indicated that adolescents viewed addiction as a way to seek refuge from the social problems they faced. Difficult university entrance exams and few job opportunities are two of the main factors rendering adolescents to feel hopeless, and leading them to drug abuse in an attempt to forget their problems. Adolescents with identified goals are less likely to abuse drugs because this would interfere with their plans (Kodjo & Klein, 2002). Having support from others and being busy were protective factors that helped adolescents remain non-smokers (Wang *et al.*, 1999).

Similarly, respondents in another study conducted in Iran on adolescents' substance abuse believed that seeking pleasure and releasing tension were the most common reasons for substance abuse (Ahmadi & Hasani, 2003). Adolescents engaging in substance use reported their reason for drug abuse as being a way to cope with disturbing emotions or inducing desirable feelings. They reported that they often lacked the social skills necessary for rejecting the offer to use drugs (Segiure & Chalmers, 2000). Kodjo and Klein (2002) have shown that adolescent cigarette smokers used more negative coping methods when encountering stress. Rebelliousness, defiance of parental authority, risk-taking behaviors, low self-esteem, lack of skills in how to say 'no', inclinations toward cigarette smoking,

establishing personal identity and stress and coping strategies, curiosity, social norms, peer pressure and relaxation (Mayhew *et al.*, 2000; Segiure & Chalmers, 2000) were some of the most determining reasons for drug abuse among the youth. Factors such as improving one's self image, 'being cool' (Rugkasa *et al.*, 2001), autonomy from parents and forgetting problems, reducing stress, self-therapy and mood elevation (Kodjo & Klein, 2002), pleasure and sociability (Corbett, 2001; Rugkasa *et al.*, 2001) were also implied. In other words, adolescents with extensive social support networks are less likely to become addicted to drugs (Brown, 2002). Furthermore, it is believed that good socioeconomic status has a significant preventive role in adolescents' addiction to drugs (Mayhew *et al.*, 2000).

As our respondents reported, being against social norms and hiding their use of cigarette smoking and alcohol can increase the tendency toward subsequent use. Hyde *et al.* (2001), in a qualitative research study on 78 adolescents with deep focused group interviews, showed adolescents prefer to hide their drinking from their parents and described it as a form of innovation and creativity (Hyde *et al.*, 2001). The results of Rezaie's (1993) study on the causes of addictions in 800 Tehranian adolescents indicated that economic problems (30%), pleasure and happiness (23%), sense of maturity (15%), and peer influence (15%) were among the most common causes of addiction.

Basically, adolescents do not believe that they will be addicted after cigarette smoking, they start and encounter many problems quitting (Piko, 2001). Cigarette smoking is a gateway into the initiation and progression of drug abuse (Myers, 1999). Evidence suggests that a positive association exists between tobacco use and use of other substances (e.g. alcohol, marijuana, cocaine and other illicit substances), and those who have not started smoking and using drugs until adolescence are less likely to be addicted (Ferguson & Horwood, 1995; Brown, 2002). A qualitative study on the remaining non-smoking adolescents indicated that those with more self confidence could remain non-smokers (Rugkasa *et al.*, 2001).

The media, including movies, video games, music and print media, which adolescents are exposed to are most influential (Brown, 2002). On the community side, restrictions that limit the potential of youth to acquire tobacco products are an important part of tobacco prevention programs. Policies that can reduce opportunities for use by adolescents include more restrictions on the sale of tobacco to adolescents, prohibition of tobacco use in public places, restrictions on tobacco availability to young people, school policies, warning labels, media targeted programs, mass media

control and purification from direct and indirect cigarette advertising and shows, smoke-free peer groups and community participation (Corbett, 2001; Von Bothmer, 2001; Kodjo & Klein, 2002). Social factors including cultural norms, environmental cues and infrastructural constraints, such as costs and realistic policies, make the initiation of tobacco use possible for adolescents (Corbett, 2001).

Interviewees pointed out that places where adolescents gather, such as schools, universities and dormitories, were suitable places for learning about and preparing drugs. The majority of 229 adolescents aged 14–19 years who were qualitatively interviewed believed that there was a shift in the location of drinking, from occasional drinking in the home to more frequent drinking outside of the home (e.g. pubs), to entry into the pub culture through adolescence. The concentration of drinking in parks and streets around age 15 suggests considerable societal ambivalence about drinking in public places at this age (Rugkasa *et al.*, 2001).

Very few studies on the role of peers and drug availability in adolescent addiction have been conducted (Seguire & Chalmers, 2000; Rugkasa *et al.*, 2001; Von Bothmer, 2001; Brown, 2002; Crossett & Kann, 2002; Ahmadi & Hasani, 2003). Peer engagement could be considered as the main predictor in adolescents' addiction (Myers, 1999). Upon entering adolescence, it becomes increasingly more important for young people to maintain friendships and group membership (Rugkasa *et al.*, 2001). Smoking becomes a way of bonding with peers (Seguire & Chalmers, 2000) and peer attachment and interactions may promote initiation of marijuana use during mid adolescence (Rugkasa *et al.*, 2001). Factors such as seeking peer supports (Von Bothmer, 2001), peer pressure, being part of a group and the need for independence, can potentially render adolescents susceptible to cigarette smoking (Seguire & Chalmers, 2000).

Adolescence is a time of weaning away from the family in favor of peer attachment and spending more time with friends after school (Reiff, 2001). In other words, attention to their relationships is an important part of adolescents' lives. Participants' claims about the critical role of youth social places are very serious.

Rugkasa *et al.* (2001) wrote that although peers are important to adolescents, being an effective and creative member of the peer group was more important. This could be used by both health and training policy makers to foster healthy and effective peer groups.

The interviews indicated that religious beliefs and awareness of the negative consequences of cigarette smoking can be considered preventive factors against adolescents' addiction. Results of a study by Parker

*et al.* (2001) carried out on 229 American Muslim ex-alcoholics revealed that respondents cited religious reasons for abandoning alcohol consumption. Adolescents who are more involved in their religious community are protected against many risky behaviors, including addiction (Myers, 1999). Deep religious beliefs in a religious culture like Iran can have many advantages. For example, it can act not only as a main agent for change but also as a caring factor.

A student's school performance is a key factor in predicting smoking behaviors (Hyde *et al.*, 2001). Drug use by teens is directly related with school failure (Kodjo & Klein, 2002) and low academic performance. Academic problems and substance use often go hand in hand. Adolescents who have poor academic achievement and a low commitment to education are more likely to engage in substance abuse (Kodjo & Klein, 2002).

Schools, which can act as a focal point of learning about and spreading addictive behaviors, can be also regarded as having preventive powers. The school has an important and unique responsibility with tobacco-free policies and by teaching about tobacco use and its detrimental effects. School smoking control plans should include environmental, non-smoking and individual issues, in order to create a consistent attitude towards smoking, and policies should be supported by resources to help students quit smoking (Von Bothmer, 2001).

Negative attitudes to cigarette smoking can be considered a preventive factor against tobacco use (Piko, 2001). Adolescents with an optimistic bias regarding addiction may be more prone to smoking. This bias creates an untenable cognitive dissonance that these adolescents resolve by continuing to believe that they will be able to quit someday and soon enough to avoid an early death (McEwen, 2002). Education and adolescents' awareness of addiction and its serious side-effects can be very important. A 64% decrease in prevalence after an educational program about addictions for adolescents has been reported (Arnett, 2000). The above-mentioned causes coupled with the increasing rate of cigarette smoking can make the responsibility of teachers, parents and health policy makers even more complex.

The findings of the present study indicate that parents often ignore cigarette smoking and alcohol consumption in their children. Concealing addiction from parents was the next subtheme participants implied.

Indications are that a two-parent family is more protective against substance abuse than a single parent family. Non-standard families (Von Bothmer, 2001), conflict with parents (Ahmadi & Hasani, 2003), laissez-faire or autocratic styles of parenting render children

susceptible to substance use and abuse (Myers, 1999). An increase in smoking and higher level use was also related to having parents or siblings who smoked. Parental availability at certain times, particularly at dinner time, is a protective factor against drug abuse. Adolescents who have maternal warmth and attachment (Everett *et al.*, 1998), caring parents and are expected by their parents to have high academic achievement are at lower risk of drug abuse (Ahmadi & Hasani, 2003).

Participants perceived that exhausted parents, who hold several jobs, do not know their teenager's developmental needs and are completely out of touch with them, can be a major reason for adolescent substance abuse.

## CONCLUSION

Adolescents are our future and their health is crucial to our society. Given the importance of adolescents' lifestyles and the impact of risky behaviors on their health, the area of adolescent health is one within which much qualitative research can be conducted. As such, we can have a better understanding of all issues pertaining to adolescence which can offer an adolescent-centered insight into their unique and complex world. This view might allow us to better work with younger people to draw on their strengths, build on their idealism, and guide them toward safer behaviors. Tobacco use might signal the possible development of a syndrome of substance use and other hazardous or deviant behaviors.

Because many students have explained their concerns about addiction, prevention programs should begin in schools, where education regarding drug abuse starts. Both educational and intervention programs can potentially help adolescents to control their stress. Additionally, educating the youth about the adverse effects of addiction might help prevent the progression from complete abstinence from smoking to experimentation. Finally, educating parents and teachers regarding adolescents' development and the risk factors for addiction will be useful. Regarding the role of socioeconomic status, a common understanding among interdisciplinary authorities, researchers and school staff is necessary if the community is to be a place for health promotion and one that enables a better life for adolescents. Reducing the gap in social class, a better future regarding jobs and education, practising religious duties, economic reforms, social welfare, effective families, healthy friendships, and building recreational facilities are useful factors that strengthen and build a healthy society.

Both quantitative and qualitative studies are necessary to further understand the complex phenomenon

of adolescent addiction, its trends, prevalence and outcomes.

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## REFERENCES

- Ahmadi J, Hasani M. Prevalence of substance use among Iranian high school students. *Addict. Behav.* 2003; **28**: 375–379.
- Arnett J. Optimistic bias and adolescent and adult smokers and nonsmokers. *Addict. Behav.* 2000; **25**: 625–632.
- Brown M. Risk factors for substance abuse in adolescents. *Pediatr. Clin. North Am.* 2002; **49**: 247–255.
- Corbett K. Susceptibility of youth to tobacco. *Respir. Psychol.* 2001; **128**: 103–118.
- Crossett L, Kann K. Cigarette smoking among Turkish high school students. *J. Adolesc. Health* 2002; **23**: 289–296.
- Everett S, Giovino G, Warren C. Substance use among high school students. *J. Adolesc. Health* 1998; **23**: 289–296.
- Fergusson D, Horwood J. Transition to cigarette smoking during adolescence. *Addict. Behav.* 1995; **20**: 627–642.
- Hyde A, Treacy M, Boland J, Whitaker T, Abaunza PS, Knox B. Alcohol consumption among 11–16 year olds. *Nurs. Health Sci.* 2001; **3**: 237–245.
- Johnson P, Boles S, Kleber H. Age related differences in adolescents smokers' and nonsmokers' assessments of the relative addictive and health harmfulness of cigarettes, alcohol and marijuana. *J. Subst. Abuse* 2000; **11**: 45–52.
- Kodjo C, Klein J. Prevention and risk factor of adolescent substance abuse. *Pediatr. Clin. North Am.* 2002; **49**: 257–268.
- Mayhew K, Flay B, Mott J. Stages in the development of adolescent smoking. *Drug Alcohol Depend.* 2000; **59**: s61–s81.
- McEwen M. *Community Health Nursing*, 2nd edn, Philadelphia: Sundberg, 2002; 700–840.
- Morse JM. *Read Me First: For a User's Guide to Qualitative Methods*. London: Sage, 2002.
- Myers M. Smoking intervention with adolescent's substance abusers. *J. Subst. Abuse Treat.* 1999; **16**: 289–295.
- Parker H, Aldridge J, Measham F. Illegal leisure: The normalization of adolescents recreational drug use/understanding and responding to drug use: The role of qualitative research. *Contemp. Drug Probl.* 2001; **28**: 179–192.
- Piko B. Smoking in adolescence. Do attitudes matter? *Addict. Behav.* 2001; **26**: 201–217.

- Priest H, Robert P, Woods L. An overview of three different approaches to the interpretation of qualitative data. *Nurse Res.* 2002; **10**: 30–43.
- Reiff M. Health compromising behaviors: Why do adolescents smoke or drink? Identifying underlying risk and protective factors. *J. Dev. Behav. Pediatr.* 2001; **22**: 148–149.
- Rezaie A. Iranian high school student's addiction tending. *The Seminar of Children and Adolescents' Problems*. Khorasgan: Open University, 1993.
- Rich M, Ginsburg K. The reason and rhyme of qualitative research: Why, when, and how to use qualitative methods in the study of adolescent health. *J. Adolesc. Health* 1999; **25**: 371–738.
- Rugkasa J, Knox B, Sittlington J. Anxious adults vs. cool children: Children's views on smoking and addiction. *Soc. Sci. Med.* 2001; **53**: 593–602.
- Seguire M, Chalmers K. Late adolescent female smoking. *J. Adv. Nurs.* 2000; **31**: 1422–1429.
- Spear H, Kulbok P. Adolescent health behaviors and related factors. *Public Health Nurs.* 2001; **18**: 82–93.
- Strauss A, Corbin J. *Basics of Qualitative Research*, 2nd edn. London: Sage Publications, 1998.
- Streubert H, Carpenter D. *Qualitative Research in Nursing*. 3rd edn. Philadelphia: Lippincott, 2003.
- Unger J, Chen X. The role of social networks and media receptivity in predicting age of smoking initiation. *Addict. Behav.* 1999; **2**: 371–381.
- Von Bothmer M. Promoting a tobacco-free generation: Who is responsible for what? *J. Clin. Nurs.* 2001; **10**: 784–792.
- Wang M, Fitzhugh E, Green B, Turner L, Eddy M, Westfield R. Prospective social psychological factors of adolescent smoking progression. *J. Adolesc. Health* 1999; **24**: 2–9.