

# Developing Country Teenagers' Consumption Related Cognition Through Involvement in Television Commercial (Tvc): A Multi-item Measurement Scale

*Md. Shamsuzzaman, Md. Ridwanul Huq, Muhammad Ziaulhaq Mamun, Mushtaque Ahmed*  
(Institute of Business Administration, University of Dhaka, Bangladesh)

**Abstract:** The core intention of the researchers is to develop and confirm a multi-item measurement scale for consumption related cognition through teenagers' involvement in Television Commercial (TVC) of developing country like Bangladesh. Another important purpose of this research is to understand the influence of TV advertisements on consumption related cognition of developing countries' teenagers. Very limited research has been conducted on consumption related cognition through involvement of TVC, even though it is the fundamental step which activates any consumers' — especially teenagers' — buying stimuli. Among the limited ones conducted, most of the research work has focused on scale items, such as product knowledge, consumer perception, purchasing intention, brand perception and product usage without providing any importance to complex variable or factors of consumption related cognition from which the scale items derive. Hence, an elaborated multi step research method has been used to find out and refine both the complex and simple variables of consumption related cognition through TVC involvement. Research findings have been statistically verified using exploratory and confirmatory factor analysis techniques. This research has revealed six main complex variables or factors namely consumption related- cognitive awareness, cognitive knowledge, cognitive mapping, cognitive linkage, cognitive complexity and cognitive skills. Four to five multi item measurement scales have been derived from each of the six factors.

**Key words:** consumer socialization; consumption related cognition; teenagers; developing country; television commercial (tvc); multi-item measurement scale

**JEL codes:** M3

## 1. Background

We know teenager means who belongs to the age group from thirteen to nineteen and also falls under the adolescence and young segment as per the definition of World Health Organization (WHO). Since WHO defines adolescent and young group as the individuals who have age group between 10 to 19, and 10 to 24 respectively. All three segments are the larger as well as fast growing segment in the universe. As per the published data of Population Reference Bureau (2013) 25% of world population is in young segment, where 25%, 17%, 27%, 29%,

---

Md. Shamsuzzaman, Doctor of Business Administration, IBA, University of Dhaka; research areas/interests: consumer behaviour (buying decision). E-mail: [fatherofsaiki@gmail.com](mailto:fatherofsaiki@gmail.com).

and 32% from more developed, less developed, less developed excluding China and least developed region of the globe. Kedmey, D. (Nov18, 2014) has reported “the UN Population Fund estimates that the global population of young people between the ages of 10 and 24 has hit 1.8 billion, a historic high. He also mentioned that the challenges are most acute for less developed countries, where 9 out of 10 of the world’s young people reside (Kedmey D., Nov18, 2014). As per the report of the “Live Bangladesh Population Clock 2017 — Population of Bangladesh Today” same demographic picture is found in our country, which are 21.1% and 29.9% of total population under the segment of adolescent and young respectively. As a result, it is the most important segment for the researchers and marketers (Live Bangladesh Population Clock 2017). According to the expert opinion of cognitive scientists as well as consumer behavior researchers, It is consider that among the three segments teenager is the strategic target group for cognitive development regarding brands which help them in buying decision as well as influence others like parents, peers etc. by watching TVC.

It has been noticed in another research paper of the author that television still the most popular media of entertainment and advertisement even though the social media craze amongst the teenagers. Because the survey report revealed that 95% and about 89% of the teen students of Dhaka city watch TV and TVC respectively either regularly or on occasion. It is known to all, Dhaka is the home of all different demographic as well as geographic classes of people who make up the country. So, it can easily conclude, TV and TVC watching pattern across the country more or less analogous. It has also been explored that 67% of teens are influenced by TVC for buying decision due to improvement of their consumption related cognition. It’s a clear indication that TVC is still the best tool for brand building especially for teenage students of developing countries, since they have high level of interest to acclimatize with a new product and service to improve their life style and standard of living individually as well as family as a whole.

Additional interesting observation was found that 100% early teens and school goers watch TV as well as female teens (91%) are more inclined on watching TVCs than Male (88%), so it is doubtless for marketers to put the best effort on television advertisement/commercial for improving cognitive knowledge and skills regarding brands among teenagers. As a result, Television and TV commercial watching is strongly interrelated considering the commercial perspective as well as the entertainment and cognitive tool for viewers individually as well as family as a whole.

Based on their research findings of Patel G. & Jain R. (2015) it is noticed that youth like TV advertisements and often want products seen in TV ads. They feel good when they watch the ads of the products that they are already using and TV ads help them to find the best products. The frequency of purchase increases due to TV advertisements (Patel G. & Jain R., 2015).

They prefer to buy and experiment with the new products. Youth collectively decide with their family members, products to be purchased due to exposure to TV advertisements It was also found that youngsters have positive attitude towards TV commercials.

Barve G, Sood A., Nithya S. and Virmani T. (2015) mentioned in their paper regarding a recent study by Indian Government that “Children and adolescents view 400 00 advertisements per year on TV alone”. Despite the fact, there is a law that limits advertising on children’s programming to 10.5 minutes per hour on weekends and 12 minutes per hour during weekdays. However, much of children’s viewing occurs during prime time, which features nearly 16 minutes per hour of advertising (Barve G., Sood A., Nithya S. & Virmani T., 2015).

So, it is well accepted due to high access to electronic media and rapid development of digital media teenagers are in the much advance stage not only choose the brands which belong to them but they also have high

influence on the brands used by family and others, where they played very limited role in the family buying decision in the past teenagers. Scrutinizing insight into the teenager's views about TVC, it is highly commendable that development of cognitive knowledge and skill (Consumption Related Cognition) on product and brand is extremely depend on TVC.

Haq R. M. & Rahman S. H (2010) have noticed that Teenagers worldwide are an emerging market segment that is receiving increasing attention from researchers and electronic media getting maximum attention as consumer socialisation agent by teenager (Dotson & Hyatt, 2005). On the other hand, Consumption related cognition is often identified as one of the common outcome components of the consumer socialisation process (Haq R. M. & Rahman S. H., 2010; Dotson M. J. & Hyatt E. M., 2005).

However many researchers across the globe have conducted voluminous research works on cognitive development of human being specially children. Comparatively less number of research works has been published on consumption related cognition which is the most critical and key paradigm for consumer socialization. A limited number of research works have been conducted on influence of teenager's consumption related cognition by watching TVC which is more important for teenagers of developing countries like Bangladesh where involvement of teenagers in TV and TVC is significantly higher than developed countries. To conduct the research on teenager's cognitive development on brand's knowledge, it's the prerequisite to explore as well as confirm factors or complex variables and related scale items or simple variables. That's why current research work has been accompanied to find out and confirm a multi — item measurement scale by using appropriate statistical analytical tools and method.

### **1.1 Research Objectives**

To explore the factors/complex variables/latent variables and related scale items/simple variables/measuring indicators of developing country teenager's consumption related cognition by watching television commercials (TVC) and its impact in buying decision.

## **2. Literature Review**

### **2.1 Television Commercial (TVC) and Cognitive Development of Teenagers**

Many renowned researchers have started research on impact of Television commercial/ Advertisement (TVC/TVA) in the cognitive development process of children mostly teenagers or adolescence since early seventies. One of the most famous researcher Albert Bandura (1989 & 1971) has concluded in his research papers that television advertisement is the dispensers of product information and argues that through observations and imitation of television advertising adolescent learn how to attach social meaning to material goods, i.e., the "expressive" or "affective" element of consumption. He also speculated the hypothesis: The more television the adolescent watches, (a) the greater the degree to which the adolescent holds social motivations for consumption and (b) the more materialistic the person's attitudes (Bandura A., 1989; 1971).

Most eminent researcher Moschis G. P. & Churchill G. A (Nov. 1978) on the basis of their research work along with the research work of Lowndes F. S. (1975) & Daniel B. W. (1971) have explored that the amount of television viewing and consequently the number of television advertisement to which adolescents are exposed, predicts the respondent's social motivations for consumption and materialistic attitudes suggested that mere exposure to this medium may also lead to the learning of the "expressive" aspects of consumption. Though the adolescent's frequency of interaction with TV appears to be an important issue in learning some skills, it is

questionable whether exposure to the medium alone is sufficient. The data show that learning from television is linked in mainly to the uses of the adolescent makes of television, especially of commercial content, much of which was assumed and found to be of a social nature. They have identified Television, families and peers as major socializing agents among young consumers in another research finding. They also recognized that media is one of the most potential socializing agents which has high control on the children cognitive development in their cognitive life cycle (Moschis G. P. & Churchill G. A., 1978; Lowndes F. S., September 1975; Daniel, B. W., 1971).

On the contrary, Robertson T. S. and Rossiter J. R. (1974) have classified the effect of advertising on children into three major types, those are: Cognitive, affective and behavior. They have also mentioned that advertisement, especially TVC which is the most common communication tools has high influence on children's cognitive development (Robertson T. S. & Rossiter J. R., 1974).

Many researchers have agreed that advertising mostly TVC provides children with valuable product information regarding product's features and benefits which help them in their development process as consumers known as consumption related cognition of the particular target segment (Buijzen M. & Valkenburg P. M., 2000; Caron A. & Ward S., 1975; Hite R. E. & Eck R., 1987; Miller J. H. & Busch P., 1979; Sheikh A. A., Prasad V. K. & Rao T. R., 1974).

Blosser B. & Roberts D. (1985), Donohue E. T. al. (1980) and Rossiter J. R. (1976) have established that cognitive effects focus on children's ability to distinguish TVCs from television programs and understand the communication intent of advertising (Blosser B. & Robert D, 1985; Donohue T. R., Henke L. L. & Donohue, 1980; Rossiter J. R. & Robertson T. S, 1976).

Jean Piaget (1970) had developed a stage theory of intellectual or cognitive development of children that included four stages: a) the sensory motor stage which includes children from birth to two years of age, at that stage the infant knows the world through their movement and sensation. They learn through basic actions such as sucking, grasping, looking and listening; b) The preoperational stage represents the children from the age of two to seven years when they think symbolically and learn to use words and pictured to represent objects as well as tend to be egocentric and struggle to see things from the perspective of others; c) The concrete operational stage belongs to the children from seven to eleven years. During this period, they start thinking more logical and organized manner where they use inductive logic or reasoning from specific information to a general principle; d) The formal operational stage which may be defined as adolescence stage, start from twelfth year and on ward of their cognitive development. During their crucial age they begin to think conceptually and find out the reason about hypothetical problem. As teenager they began to think more about moral philosophical, ethical, social and political issues that require theoretical and abstract reasoning (Piaget J., 1970).

Most of the researchers who worked on cognitive development of children have adopted different stages of Piaget theory of cognitive development as their research guideline. Ali A., Batra D. K., Ravichandran N., Mustafa Z. and Rehman S. (2012) have explained in their research finding, Children at Piaget's preoperational stage respond to commercial in a different way than do children at concrete operational stage. Children at concrete operational stage are matured enough to differentiate between a television commercial and television program. The studies have also revealed that children's respond to commercials gradually decreases as they proceed to concrete operational stage. As children get older, they increasingly show annoyance and skepticism while watching commercials (Ali A., Batra D. K., Ravichandran N., Mustafa Z. & Rehman S., 2012).

Valkenburg P. M. (2000) has narrated in his research work that behavioral effects studies of advertising focused on the extent to which children are persuaded by advertisements because young children usually don't

have the means to purchase products, behavioral effects are usually measured by children's preference for products or by the requests they make in response to advertised products. Behavioral effects studies have shown that television advertising is major source of children's products requests and that children who watch more television are more likely to ask for advertised products (Valkenburg P. M., 2000).

Razzaque M. A. (2009) has exposed in his research finding that TV advertisements have four general effects on children: they tend to create appeal leading to purchase or purchase request to parents; they often help develop "parent-child" conflict; they lead to creation of materialistic values in viewers minds; and they often have an impact on children's health. He also mentioned that attractive advertisements can highly influence children's attitudes and purchase behavior as well as those who have positive attitude towards an advertisement tend to actually purchase the advertised product themselves or request their parents to purchase it; and those who have negative attitude towards it may simply ignore the ad and do not take any step to purchase the advertised product (Razzaque M. A., 2009).

He also focused on a 16-item scale of different cognitive and affective reactions towards television advertising was used to measure the degree of the tween-agers' awareness of TV advertisements. These reactions adapted from the works of Rossiter (1977) and Shabbir et al. (2008) included perceived truthfulness, believability, trustworthiness and persuasive power of the ad; objectivity in describing advertised products/services; level of annoyance generated by the ad; overall liking for the ad; and the ad's ability to create a desire or urge to make a purchase (Razzaque M. A., 2009).

According to Selman (1980), children in the 8-10 year age group start to understand that same information may lead to different interpretation and develop the ability to consider another person's viewpoint. However, the ability to simultaneously consider one's own viewpoint along with that of others emerges in children in the age range of 10-12. At this stage, children can understand persuasion and can negotiate. Kobasigawa (1977) and Wartella and Alexander (1979) endorsed this view noting that children who are 11 or older watch ads with a view to form an attitude toward what is being advertised. They also have the ability to compare various available alternatives, which is important for forming consistent attitude. In other words, children in their "tween" years are able to form beliefs about products and brands and can develop their priorities accordingly (Selman R. L., 1980).

Clay A. R. (2000) stated that the main factor determining a child's understanding of advertising is his or her age. The results of the research let him distinguish several age groups and their understanding of advertising:

- 1) Very young children (up to 4 years of age) do not distinguish between commercials and TV programs. Due to their distinctness, melodies and short duration commercials for such children are the most interesting programs.
- 2) Older children (between 5 and 8 years of age) are already able to distinguish between commercials and other TV programs. However, they recognize commercials from external, formal features (e.g., commercials are short, programs last long). They do not really perceive the intent of persuasion and selling which are hidden behind the imagery of commercials. Therefore, they cannot look at commercials critically and resist their influence consciously.
- 3) Children aged between 9 and 12 years can almost discriminate between the contents of commercials and TV programs (programs are stories, commercials are about products). They comprehend that advertising indicates what products to buy. They can look upon advertising more critically and objectively, and can resist its influence. The ability to take advertising critically becomes more important than the total amount of viewed commercials (R. A. Clay, 2000).

Curtis A. C. (2015) has summarized in his renowned research work about the stages of adolescences and their cognitive development as Early Adolescence (11 to 13 years) when start developing pre-frontal cortex; Concrete thought to increasing formal operations and abstraction, Adolescence (14 to 17 years) when continued pre-frontal cortex development; Increasing formal operations and abstraction, Young Adulthood (18 to 25years) when completed brain development; Increased formal operations and abstract reasoning.

Barve G., Sood A., Nithya S. and Virmani T. (2015) stated in their research finding and analyzing the Association for Consumer Research Study (2008) that the age is negatively associated with television advertising viewing and family communications; it is positively associated with peer communication. There is an increased participation of children in the family buying decisions and it may be because of the increased exposure the teenagers are gaining of knowledge through advertising about the products and services in the market (Barve G., Sood A., Nithya S. & Virmani T., 2015).

The author in the same article also said that there is an extensive impact on the undeveloped brains of the kids and the teen because of advertising. As a result, marketers have started targeting teens as a special segment for the advertising. One of the reason could be, the teens or the young people are impulsive buyers and do not think much before making the purchase decision. Another reason could be the decision-making power in the hand of the children as well and the money to buy the products. Marketers taking this as an opportunity have started paying special attention to target this segment of consumers advertisements normally have a mental and physical impact on the teenagers viewing television (U. L. Abideen Z. & Salaria R., 2009; Martin M. C. & Gentry J. W., 1997).

## **2.2 Consumer Socialization and Consumption Related Cognition**

Haq R. M. (August, 2010), in his dissertation paper of Doctor of Philosophy of Marketing, cited that cognitive knowledge and skills, buying attitudes and respective values towards the consumption have been identified as three key outcome of the consumer socialization process which is highly influenced by the teenagers.

Among these, consumption related cognition is the initial and fundamental construct of consumer socialization process, since a consumer, until he passes the cognitive stage, cannot imagine to complete the buying decision process (Haq R. M., August 2010).

The most traditional definition of consumer socialization as proposed by Ward (1974) is "the process by which young people acquire skills, knowledge and attitudes relevant to functioning as consumers in the market place". In the consumer socialization process, socialization agents are specific sources from which norms, attitudes, motivations, and behaviors are transmitted to young consumers. They can be people or organizations that provides influence through frequent interaction with an individual, primacy over the individual, or control over rewards and punishments given to the individual (Brim, 1966).

Atkinson L., Nelson M. R. and Rademacher M. A. (2015) Defined consumer socialization is the process whereby individuals attain and develop skills, knowledge and attitudes which help them functioning as members of a particular culture and society, later on helps society function by reinforcing norms, customs, values and ideologies. The traditional view of children's consumer socialization process and cognitive development took a step-by-step approach. But taking both old and modern versions into account, one fact remains unchanged: the process of socialization is in its most rigorous form during an individual's childhood and the foundations for ongoing socialization during his life span is set in large portion during this very stage (Atkinson L., Nelson M. R. & Rademacher M. A., 2015).

John D. R (1990) was defined consumer socialization as a development process lasting through several

**Developing Country Teenagers' Consumption Related Cognition Through Involvement in Television Commercial (Tvc): A Multi-Item Measurement Scale**

stages until children become adult consumers. Based on cognitive and social development stages it is possible to see changes appearing when children are more and more involved in consumer's role. There are three stages of consumer socialization: perceptual, analytical and reflective (D. Roedder John, 1999).

Characteristics	Perceptual stage (6-7) yrs.	Analytical stage (7-11) yrs.	Perceptual stage (11-16) yrs.
<b>Knowledge structures</b>			
Orientation	Concrete	Abstract	Abstract
Focus	Perceptual features	functional/underlying features	functional/underlying features
Complexity	Uni-dimensional	Two or more dimensions	Multidimensional
Perspective	Egocentric (own perspective)	Dual perspectives (own + others)	Dual perspectives in social context
<b>Decision-making and influence strategies</b>			
Orientation	Expedient	Thoughtful	Strategic
Focus	Perceptual features Salient features	functional/underlying features	functional/underlying features
Complexity	Single attributes	Two or more attributes	Multiple attributes
Adaptive	Emerging	Moderate	Fully developed
Perspective	Egocentric	Dual perspectives	Dual perspectives in social context

Chan K. and McNeal J. U. (2002 & 2006) in their prominent research works on consumer socialization has mentioned two theoretical models, the cognitive developmental model and the social learning model. The cognitive developmental model has higher involvement for forecasting children's understanding of commercial communications than the social learning model. The cognitive developmental model explains the formation of consumer knowledge, skills and behaviors as a function of qualitative changes in cognitive development stages. Children are conceptualized to have gone through different stages from infancy to adulthood, each marked with its cognitive structure. Integrating Piaget's (1970) stage theory of cognitive development and Selman's (1980) stage theory of social development, John (1999) proposed a model of consumer socialization that is particularly useful in characterizing children's response to advertising (Chan K. & McNeal J. U, 2002; 2006).

On the other hand, McLeod J. M. and O' Keefe (1972) think the social learning model explains the formation of consumer knowledge, skills and behaviors as a function of interactions between socialization agents and individuals in different social settings. Attitudes, motivations, and values are learned through modeling, reinforcement, and social exchange. The social learning model implies that the more interaction between the socializing agents and the individuals, the more likely learning will take place. In other words, children with more social interaction with parents regarding commercial communications, for example, will be more likely to understand commercial communications (McLeod J. M. & O' Keefe G. J. Jr., 1972).

Oates C., Blades M. and Gunter B. (2002) have stated in their research's outcome that television advertising plays an important role in children's consumer socialization but cumulative exposure to commercials has a positive but weak relationship with understanding of advertising intent (Oates C., Blades M. & Gunter B., 2002).

On the basis of many research's finding of eminent researchers, it can be clearly concluded that consumption related cognition is one of the most common and fundamental outcomes of the consumer socialisation process and consumer socialization is the process by which individuals develop consumption-related cognition and behaviours (Chan, 2003; Moschis & Moore, 1979; Schmoll et al., 2006; Moschis & Smith, 1985).

As per the latest definition of Oxford dictionary Cognition is the mental action or process of acquiring knowledge and understanding through thought, experience, and the senses. It encompasses processes such as knowledge, attention, memory and working memory, judgment and evaluation, reasoning and “computation”, problem solving and decision making, comprehension and production of language, etc. Human cognition is conscious and unconscious, concrete or abstract, as well as intuitive (like knowledge of a language) and conceptual (like a model of a language). Cognitive processes use existing knowledge and generate new knowledge.

The processes are analyzed from different perspectives within different contexts, notably in the fields of linguistics, anesthesia, neuroscience, psychiatry, psychology, education, philosophy, anthropology, biology, systemic, logic, and computer science.

These and other different approaches to the analysis of cognition are synthesized in the developing field of cognitive science, a progressively autonomous academic discipline. Within psychology and philosophy, the concept of cognition is closely related to abstract concepts such as mind and intelligence. It encompasses the mental functions, mental processes (thoughts), and states of intelligent entities (humans, collaborative groups, human organizations, highly autonomous machines, and artificial intelligences).

Thus, the term's usage varies across disciplines; for example, in psychology and cognitive science, “cognition” usually refers to an information processing view of an individual's psychological functions.

It is also used in a branch of social psychology called social cognition to explain attitudes, attribution, and group dynamics (Patel G. & Jain R., 2015). In cognitive psychology and cognitive engineering, cognition is typically assumed to be information processing in a participant's or operator's mind or brain.

There are three parts of the mind which are conation, affective and cognitive. In short, the cognitive part of the brain has to do with intelligence, the affective deals with emotions and the conative drives how one acts on those thoughts and feelings. Conation is also defined by Funk & Wagnalls (1977) as “the aspect of mental process directed by change and including impulse, desire, volition and striving” (Oxford University Press, 2002; Corsini R. J., 1984).

Abraham Maslow, the creator of “Maslow's hierarchy of needs”, discussed the idea of conation in his widely cited work “A Theory of Human Motivation”. In his work, he states that cognition is itself conative. That is, that the desire to know comes from an act of will, that effectively therefore conation is prepotent to cognition (Maslow A. H., 1943).

Schiffman et al. (2005) are defined cognition as “knowledge that is acquired by a combination of direct experience and information from various sources”. Wagner (2008) has defined cognition as the mental processes involved in gaining knowledge and comprehension, including thinking, knowing, remembering, judging, and problem solving (Schiffman L., Bendall D., O'cass A., Paladino A. & Kanuk L., 2005).

Cognition can be defined as the mental process of acquiring knowledge and skills which includes improvement of thinking consist of imagination, new ideas generation and its prioritization to pick the best one. It's also include knowing which means information collection, proper analysis, correlate with existing and do comparative, mapping to enrich knowledge; remembering which defines as recapitulation, enriched knowledge based analysis as well as methodical reviews to migrate next step; Judging which denotes advanced stage of analysis on acquired knowledge and skills to proceed conclusive stage of problem solving. Problem solving includes problem identification and shaping in terms of introspection, behaviorism, simulation and computer modeling.

Summarizing the research finding of Bartlett E., Griffiths G. & Badian V. (2008), Moschis G. P. & Moore R. L. (1978) and Bush V. D., Martin C. A. & Bush A. J. (2004) consumption related cognition can be conceptualized as the mental processes involved in gaining knowledge and comprehension; including thinking, knowing, remembering, judging, problem solving and skill development regarding products and brands consumption. (Bartlett E., Griffiths G. & Badian V. 2008; Moschis G. P. & Moore R. L., 1978; Bush V. D., Martin C. A. & Bush A. J., 2004).

Acevedo-Polakovich I. D., Lorch E. P., Milich R., Ashby R. D. (2005) and Choi S. M. & Ferle C. L. (2004) have expressed in their research articles that teenagers are extremely involved with the different content of TV and various TV vehicles which help them in cognitive development (Acevedo-Polakovich I. D, Lorch E. P., Milich R. & Ashby R. D. 2005).

Dotson M. J. & Hyatt E. M. (2005) and Bearison D. J., Bain J. M. & Daniele R. (1982) have explored that teenagers' cognitive development from the context of consumer socialisation is highly influenced by TV watching (Bearison D. J., Bain J. M. & Daniele R., 1982).

Anderson D. R., Huston A. C., Schmitt K. L., Linebarger D. L., Wright J. C. & Wright J. C. (2001) have noticed in their research papers that the cognitive development of teenaged children is significantly affected by electronic media, particularly Television (TV). They also noticed that cognitive development as an outcome of teenagers' socialisation process by the media is mainly explained from the perspectives of displacement, cultivation and observational learning theories. According to displacement theory, the cognitive development of teenaged children does not depend on the amount of TV viewing but rather on the content of TV (Anderson D. R., Huston A. C., Schmitt K. L., Linebarger D. L., Wright J. C. & Wright J. C., 2001).

Brown J. D. (1993) and Brown, JD & Steele, JR (1995) has explained cultivation theory that frequent TV viewing increases the likelihood of the development of consumption related cognition which ultimately alters viewers' behaviour (Brown J. D., 1993; Brown J. D. & Steele J. R., 1995).

Gruber E & Thau H (2003) has observed that Cultivation theory mainly suggests teenagers' learning from TV is strongly associated with the volume of their watching and involvement with TV. He also added that cognitive development of the consumer through the media also has been discussed by social learning theory, particularly by observational learning theory (Gruber E. & Thau H., 2003).

Bandura A. (1977) and Ward, M & Rivadenyra, R (1999) have pointed out observational learning theory that people learn from observing others' behaviour and practice accordingly if rewarded and reinforced (Bandura A., 1977; Ward M. & Rivadenyra R., 1999).

Lueg J. E. & Finney R. Z. (2007) and Moschis G. P. & Churchill Jr G. A. (1978) has noticed that particularly, teenaged children through observation or by imitating their favourite characters from TV content, develop their consumption related knowledge, ideas and skills that influence their consumption related behaviour as well as consumption related cognition (Lueg J. E. & Finney R. Z. 2007; Moschis G. P. & Churchill Jr G. A., 1978).

Zimmerman F. J. & Christakis D. A. (2005) have stated in the research paper that information processing capacity, creativity, and narrative skills of teenagers are significantly influenced by the involvement with TV. Research findings also indicated that not only is the time given to TV, but also the TV content is important for the cognitive development of teenaged children (Zimmerman F. J. & Christakis D. A., 2005).

Eastin M. S. (2005) has noticed that TV as a consumer socialisation agent consolidates consumption related knowledge, skills, capacity and consumer role perception in to the consumer socialisation process. In particular, teenagers' information seeking experiences about various products and services are triggered by TV (Eastin M. S.,

2005).

Bartlett E Griffiths G. & Badian V. (2008) and Ward S & Wackman D (1974) have illustrated in their research finding that TV provides information about the market condition which creates teenagers' awareness and helps their recalling capacity of various products and brands (Ward S. & Wackman D., 1974).

Since cognitive development and consumption related cognition is the basic as well as complex arena of human mental process which related many academic disciplines such psychology, education, philosophy, anthropology, biology, systemic, logic, linguistics, anesthesia, neuroscience, psychiatry, computer science etc. As a result, researcher tried to concentrate on particular chapters of related disciplines to explore scales items for consumption related cognition of teenagers which has been classified further into latent variables or factors by analyzing through most commonly used statistical tools.

### **3. Research Methodology**

This research concentrates on both qualitative and quantitative means of acquiring research information. At the quantitative stage, the research made use of both secondary data by pertinent literature review. An intensive literature review has been conducted covering influence of TVC on consumer socialization process and its three prime outcomes — consumption related cognition, consumption related attitude and consumption related values as well as consumer buying behavior emphasizing on developing country's teenagers of such as Bangladesh through involvement of television commercial (TVC). The thorough literature review provided the researchers with a clear guideline for developing a refined research methodology to carry out the research. In this regards various published research papers of different international journals, statistical yearbooks, reports of few research companies and national and international NGO's working on teenagers TVC watching patterns and its impacts.

At the qualitative stage, few expert opinions were collected who has academic research knowledge and practical experience on the cognitive development of individual at different stages. To explore the mind share, and understanding of teenagers in respect consumption related cognitive knowledge, two distinct comprehensive focused group discussions were conducted in two institutions of Dhaka city such BAF Shaheen College and Udayan Higher Secondary School & College where students can complete up to twelve grades. Each group consisted of both six enthusiastic boys and girls at various ages and grades whose insightful responses added meaningful substance to the research specially ascertaining scale items. The primary objective of the discussion was to incite them on the perception of TVC and its viewing patterns. Through this, we have gained a broader understanding of the cognitive processes in the minds of those teenagers that resulted from viewing TVCs. Although the perception of cognitive processes regarding consumption was to some extent clear to these respondents, they lacked a structured knowledge on the subject. This is why the FGD was conducted in a manner which revealed the depth of knowledge of the respondents regarding consumption related cognitive factors as well as associated scale items through the influence of TVC. The fact is that most of the respondents were able to express their perceptions which are very prudently allied with the literatures findings in an unstructured manner. To further ensure that responses were precise and relevant, the discussions were longitudinally managed to extract insights aligned with the conceptual framework of the research work.

On the basis of above qualitative analysis six factors responsible for consumption related cognition and linked scale items are primarily identified which can define as research schema — fundamental of research work. The explored research schema has been shown in the chart for quantitative statistical analysis through primary data.

**Developing Country Teenagers' Consumption Related Cognition Through Involvement in Television Commercial (Tvc): A Multi-Item Measurement Scale**

Parameter	Complex Variables/factors/latent variables	Simple Variables/measurement scales/Indicator/Manifest
<b>Consumption Related Cognition</b>	Consumption Related Cognitive Awareness	1. Imagination(CA1) 2. Receiving new idea(CA2) 3. Coding of new Brand(CA3) 4. Recalling old Brand. (CA4) 5. Retaining Brand/Product name(CA5)
	Consumption Related Cognitive Knowledge	1. Initial Information of Product/brand(CK1) 2. Detail Information of product/brand(CK2) 3. Additional features & benefits(CK3) 4. Need for further product information. (CK4)
	Consumption Related Cognitive Mapping	1. Drawing Attention(CM1) 2. Coding, Decoding & Retaining required product knowledge(CM2) 3. Comprehension of product features & benefits(CM3) 4. Conceptualization(CM4)
	Consumption Related Cognitive Linkage	1. Developing interest(CL1) 2. Product Evaluation(CL2) 3. Comparison(CL3) 4. Computation of additional Benefits(CL4) 5. Finding Competitive Advantages(CL5)
	Consumption Related Cognitive Complexity	1. Searching more Information(CC1) 2. Sharing Information(CC2) 3. Seeking Expert opinion(CC3) 4. Self-analysis and Validation(CC4) 5. Activate Buying Stimuli (CC5)
	Consumption Related Cognitive Skills	1. Develop consumption related attitude (CS1) 2. Sample collection/ Trial Purchase (CS2) 3. Trial Use(CS3) 4. Validation with expectation(CS4) 5. Perception of Brand Value(CS5)

To collect primary data, a structured questionnaire was prepared banking on consumption related cognitive factors as well as associated measurement scales. An English questionnaire prepared initially, was later translated into Bengali (local language) to accommodate the ease of respondents such as early teenagers. A pilot testing was carried out using both English and Bengali questionnaires separately. A total of 265 respondents were surveyed where 250 were considered as valid for statistical analysis.

Most widely used statistical tools has been used to refine or statistically validate measurement scale items of consumption related cognition of developing country's teenagers through watching TVC which are coefficient alpha or Cronbach's alpha, KMO and Bartlett's test, exploratory factor analysis and confirmatory factor analysis by the help of AMOS.

#### 4. Research Findings and Analysis

##### Case Processing Summary

		N	%
Cases	Valid	250	94.3
	Excluded <sup>a</sup>	15	5.7
	Total	265	100.0

a. List wise deletion based on all variables in the procedure.

**4.1 Overall Reliability**

**Reliability Statistics**

Cronbach's Alpha	No of scale Items
.951	28

It is well accepted by researchers that Cronbach's alpha ( $\alpha$ ) or coefficient alpha developed by Lee Cronbach in 1951, measures reliability or internal consistency of scale items. In a simple way, we can say Cronbach's alpha tests to see if multiple-question Likert scale surveys are reliable and research designed is accurately measuring the variable of interest. These questions also measure latent variables or hidden or unobservable.

Gliem J. A. and Gliem R. R. (2003) noticed through their prominent research work that Cronbach's alpha reliability coefficient normally ranges between 0 and 1 which is agreed by statistical analysts. However, there is actually no lower limit to the coefficient. The closer Cronbach's alpha coefficient is to 1.0 the greater the internal consistency of the items in the scale. Based upon the formula  $\alpha = rk / [1 + (k - 1) r]$  where k is the number of items considered and r is the mean of the inter-item correlations the size of alpha is determined by both the number of items in the scale and the mean inter-item correlations (Gliem J. A. & Gliem R. R., 2003; Cronbach L. J., 2004).

George D. & Mallery P. (2003) provide the following rules of thumb for Cronbach's alpha: "> .9 – Excellent, .8 – Good, > .7 – Acceptable, > .6 – Questionable, > .5 – Poor, and < .5 – Unacceptable" (George D. & Mallery P., 2003, p. 231).

On the basis of the research finding of above researchers, it can be concluded, the result of Cronbach's alpha for 28 scale items is excellent in terms of reliability or internal consistency, since the result is 0.951 which is close to 1. So, we can move forward to find out the associated factors or latent variables.

**4.2 KMO and Bartlett's Test**

Statistician Kaiser invented this method in 1970 along with Mayer and Olkin. Their statistical test get recognition in the same year. The test measures sampling adequacy for each variable in the model and for the complete model.

From our 250-data analysis we find the bellow result for our KMO and Bartlett's Test.

**KMO and Bartlett's Test**

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.910
Bartlett's Test of Sphericity	Approx. Chi-Square	4359.120
	df	378
	Sig.	.000

Field A. (2009) has mentioned that the KMO can be calculated for individual and multiple variables and represents the ratio of the squared correlation between variables to the squared partial correlation between variables. The KMO statistic varies between 0 and 1. A value of 0 indicates that the sum of partial correlations is large relative to the sum of correlations, indicating diffusion in the pattern of correlations (hence, factor analysis is likely to be inappropriate). A value close to 1 indicates that patterns of correlations are relatively compact and so factor analysis should yield distinct and reliable factors. Kaiser (1974) recommends accepting values greater than 0.5 as barely acceptable (values below this should lead you to either collect more data or rethink which variables to include) (Field A., 2009; Kaiser H. F. 1974).

Furthermore, Hutcheson G. & Sofroniou N. (1999) confirmed that KMO values between 0.5 and 0.7 are mediocre, values between 0.7 and 0.8 are good, values between 0.8 and 0.9 are great and values above 0.9 are

**Developing Country Teenagers' Consumption Related Cognition Through Involvement in Television Commercial (Tvc): A Multi-Item Measurement Scale**

superb (Hutcheson G. & Sofroniou N., 1999).

Form the table it has been observed that KMO Value is .910 for our total of 28 elements. According to the Kaiser assumption and other research finding, we can conclude that this KMO Result is Marvelous or superb. So, the patterns of correlations among scale items are relatively compact. As a result, factor analysis should yield distinct and reliable factors.

**4.3 EFA and CFA analysis**

Fabrigar L. R., Wegener D. T., MacCallum R. C. and Strahan E. J. (1999) have suggested that research is a combination of both EFA and CFA to form a two-phase approach. The first phase involved employing EFA for scale assessment and refinement and the second phase involves employing CFA for scale validation (Fabrigar L. R., Wegener D. T., MacCallum R. C. & Strahan E. J., 1999).

Hurley A. E., Scandura T. A., Schriesheim C. A., Brannick M. T., Seers A., Robert J., Vandenberg R.J. and Williams L. J. (1997) have explored in their prominent research paper that researchers need to have a strong theory underlying their measurement model before analyzing data while using CFA. Since it is often used in data analysis to examine the expected causal connections between variables. On the other hand, supporters of EFA believe that CFA is over applied and used in inappropriate situations. Despite the rhetoric to the contrary, some researchers believe that CFA is still being used with little theoretical foundation, and that reviewers may be requiring CFA where a simpler alternative would be as or more appropriate. EFA is often considered to be more appropriate than CFA in the early stages of scale development because CFA does not show how well items load scale on the no hypothesized factors. EFA and CFA can provide complementary perspectives on one's data (Hurley A. E., Scandura T. A., Schriesheim C. A., Brannick M. T., Seers A., Robert J., Vandenberg R. J. & Williams L. J., 1997).

They also stated that others believe each method is appropriate in different situations. EFA may be appropriate for scale development while CFA would be preferred where measurement models have a well-developed underlying theory for hypothesized patterns of loadings. A line of research would start out with studies utilizing EFA while later work would show what can be confirmed.

Depending on logical justification of many eminent researchers of concerned area, research outcome has been statistically validated using major tools of EFA and CFA, summarized result of statistical analysis has been put in the given table.

Factors/Complex Variables	Scale Items/ Simple variables	Factor loading (CFA)	%Variance Extracted	Eigen value	Coefficient Alpha	Inter item correlation (EFA)
<b>Consumption related cognitive awareness</b>	CA1	.489	53.911	2.696	.782	.514
	CA2	.689				.756
	CA3	.733				.662
	CA4	.581				.688
	CA5	.532				.615
<b>Consumption related cognitive knowledge</b>	CK1	.675	63.682	2.547	.810	.620
	CK2	.776				.665
	CK3	.749				.674
	CK4	.541				.516
<b>Consumption related cognitive mapping</b>	CM1	.712	53.449	2.498	.795	.631
	CM2	.705				.561

**Developing Country Teenagers' Consumption Related Cognition Through Involvement in Television Commercial (Tvc): A Multi-Item Measurement Scale**

	CM3	.716				.547
	CM4	.507				.626
<b>Consumption related cognitive linkage</b>	CL1	.652	57.497	2.875	.814	.680
	CL2	.672				.578
	CL3	.658				.582
	CL4	.720				.637
	CL5	.712				.663
<b>Consumption related cognitive complexity</b>	CC1	.716	65.257	3.263	.866	.692
	CC2	.709				.561
	CC3	.758				.720
	CC4	.642				.738
	CC5	.684				.610
<b>Consumption related cognitive skills</b>	CS1	.649	61.305	3.065	.841	.575
	CS2	.736				.596
	CS3	.824				.684
	CS4	.668				.558
	CS5	.714				.668

Field A. (2009) stated that once a factor structure has been found, it is important to decide which variables make up which factors by factor loading typically, researchers take a loading of an absolute value of more than 0.3 to be important. However, the significance of a factor loading will depend on the sample size. He also proposed that if a factor has four or more loadings greater than 0.6 then it is reliable regardless of sample size (Field A., 2009).

Stevens J. P. (2002) produced a table of critical values against which loadings can be compared. As per his recommendation, a sample size of 50 a loading of 0.722 can be considered significant, for 100 the loading should be greater than 0.512, for 200 it should be greater than 0.364, for 300 it should be greater than 0.298, for 600 it should be greater than 0.21, and for 1000 it should be greater than 0.162. A value can be found by squaring the factor loading to give an estimate of the amount of variance in a factor accounted for by a variable (like R<sup>2</sup>). In this regards he also recommended interpreting only factor loadings with an absolute value greater than 0.4 which explain around 16% of the variance in the variable (Stevens J. P., 2002; Mac Callum R. C., Widaman K. F., Zhang S. & Hong S., 1999).

In the given table all factor loadings for each factor against respective variables are more than 0.4 and % variance extracted are much more than 16% which confirm all factors are meaningful for respective variables or scale items.

Cliff N. (1988) noted that reliability and internal consistency among different variables will be positive if the Eigenvalues of the factor is more than one (Cliff N., 1988).

Eigenvalues of individual factor is more than two (2), we can draw easy conclusion that all factors are reliable and inter-consistency among scale items of respective factor are also reliable.

Considering the result of coefficient alpha of all factors, it has been explored that four factors are good and rest two are acceptable in terms of reliability or internal consistency, since the result are more than 0.8 and 0.7 respectively.

MacCallum R. C., Widaman K. F., Zhang S. & Hong S. (1999) have shown that the minimum sample size or sample to variable ratio depends on other aspects of the design of the study. In short, their study indicated that as

**Developing Country Teenagers' Consumption Related Cognition Through Involvement in Television Commercial (Tvc): A Multi-Item Measurement Scale**

communalities become lower the importance of sample size increases. With all communalities above 0.6, relatively small samples (less than 100) may be perfectly adequate. With communalities in the 0.5 range, samples between 100 and 200 can be good enough provided there are relatively few factors each with only a small number of indicator variables (Mac Callum R. C., Widaman K. F., Zhang S. & Hong S. (1999).

Inter items correlation or communalities of 28 scale items is very good, since all values are exceeded 0.5 and most of the values are more than 0.6. So, all the scale items are very much correlated or cohesive.

Finally, we can make a firm conclusion that explored consumption related cognition's factors and respective scale items of developing country's teenagers by watching TVC are statistically validated by multi-stages statistical processes. On the other hand, it is also highly noticeable that TVC has very high influence on teenager's consumption related cognition, one of the vital outcome of consumer socialization process as well as effective ice breaking stage of buying decision model including strong impact on consumer's aptitude and attitude.

**5. Summary, Conclusion and Recommendation**

In the research work, we have followed the scale development model of Furr R. M. (2010) and Tay L. and Jebb A. (2017) which are the well accepted model by many researchers (Furr R. M., 2010; Tay L. & Jebb A., 2017). On the basis of the model 28 scale item has been identified for developing country teenager's consumption related cognition by watching television commercial (TVC). Later on, six individual latent items or factors have been explored with associated scale items from 28 variables using commonly used statistical tools. These factors and scale items were then tested using multi-stage quantitative measures and reconfirmed, which are as follows:

<b>Parameter</b>	<b>Complex variables/ factors/latent variables</b>	<b>Simple variables/measurement scales/indicator/manifest</b>
<b>Consumption related cognition</b>	Consumption related cognitive awareness	Imagination (CA1) Receiving new idea (CA2) Coding of new Brand (CA3) Recalling old Brand (CA4) Retaining Brand/Product name (CA5)
	Consumption related cognitive knowledge	Initial Information of Product/brand (CK1) Detail Information of product/brand (CK2) Additional features & benefits (CK3) Need for further product information (CK4)
	Consumption related cognitive mapping	Drawing Attention (CM1) Coding, Decoding & Retaining required product knowledge (CM2) Comprehension of product features & benefits (CM3) Conceptualization (CM4)
	Consumption related cognitive linkage	Developing interest (CL1) Product Evaluation (CL2) Comparison (CL3) Computation of additional Benefits (CL4) Finding Competitive Advantages (CL5)
	Consumption related cognitive complexity	Searching more Information(CC1) Sharing Information (CC2) Seeking Expert opinion (CC3) Self-analysis and Validation(CC4) Activate Buying Stimuli (CC5)
	Consumption related cognitive skills	Develop consumption related attitude (CS1) Sample collection/Trial Purchase (CS2) Trial Use (CS3) Validation with expectation (CS4) Perception of Brand Value (CS5)

Across the world, the teen population is the most rapidly growing segment of the population, more so in the developing countries. On the other hand, if we analyze the current trend of consumer behavior, teenagers play a vital role in their buying decision, as well as act as a potential influencer for their family and peers. As a result, this segment is a focal point for the researchers of consumer behavior. Consumption related cognition is a key component of the consumer socialization process, as well as the consumer buying decision model. Which is why the research findings is very important for researchers, academics, marketers, brand builders, media buying specialists, as well as sponsors, to get a clear understanding on the influence of television commercials.

The research focused on the teenage population of Bangladesh as one of the developing countries of the world. Considering the social, demographic, cultural, as well as economic factors, the consumer behavior of Bangladeshi teenagers may not represent that of the teenagers of other developing countries, in respect of the influence of TVCs. As such, the findings of the report on teenagers' consumption related cognition may not be applicable to other countries, so, there is a huge opportunity for researchers and academics to conduct further research in other developing countries to understand if the findings of this research can be used there. This research will help other researchers to open up a new area for empirical research, such as development of theory and models on consumption cognition.

#### **References**

- Ali A., Batra D. K, Ravichandran N., Mustafa Z. and Rehman S. (2012). "Consumer socialization of children: A conceptual framework", *International Journal of Scientific and Research Publications*.
- Atkinson L., Nelson M. R. and Rademacher M. A. ( 2015). "A humanistic approach to understanding child consumer socialization in us homes", *Journal of Children and Media*, Vol. 9, No. 1, pp. 95-112.
- Acevedo-Polakovich I. D., Lorch E. P., Milich R., Ashby R. D. (2005). "Disentangling the relation between television viewing and cognitive processes in children with attention-deficit/hyperactivity disorder and comparison children", *Archives of Pediatrics and Adolescent Medicine*, Vol. 160, No. 4, pp. 354-360.
- Anderson D. R., Huston A. C., Schmitt K. L., Linebarger D. L., Wright J. C. and Wright J. C. (2001). "Academic achievement", *Monographs of the Society for Research in Child Development*, Vol. 66, No. 1, pp. 36-66.
- Barve G., Sood A., Nithya S. and Virmani T. (2015). "Effects of advertising on youth (age group 13-19 years age)", *Journal of Mass Communication and Journalism*, Vol. 5, p. 260.
- Bandura A. (1989). "Social cognitive theory", in: R. Vasta (Ed.), *Annals of Child Development*, Vol. 6, *Six Theories of Child Development*, Greenwich, CT: JAI Press, pp. 1-60.
- Bandura A. (1971) "Modeling influence of children", testimony to the Federal Trade Commission.
- Buijzen M. and Valkenburg P. M. (2000). "The impact of television advertising on children's Christmas wishes", *J. Broadcast Electronic Media* (in press).
- Blosser B. and Robert D. (1985). "Age differences in children's perceptions of message: Responses to TV news, commercials, educational, spots and public service announcements", *Common Res.*, Vol. 12, pp. 455-484.
- Bush V. D., Martin C. A. and Bush A. J. (2004). "Sports celebrity influence on the behavioral intentions of generation y.", *Journal of Advertising Research*, Vol. 44, No. 1, pp. 108-118, viewed 27/09/08, WARC.
- Bartlett E., Griffiths G. and Badian V. (2008). "Digital advertising in 2142: Measuring the effectiveness of advertising to the playstation generation", *Market Research Society: Annual Conference*, London, 18-19 March 2008.
- Bearison D. J., Bain J. M. and Daniele R. (1982). "Developmental changes in how children understand television", *Social Behaviour & Personality: An International Journal*, Vol. 10, No. 2, pp. 133-144.
- Brown J. D. (1993). "Media sex and the adolescent", in: Gernberg B. S., Brown J. D., Buerkel-Rothfuss N. L.(Eds.), *Theoretical Overview*, New Jersey, Hampton Press.
- Brown J. D. and Steele J. R. (1995). *Sex and the Mass Media*. California, Henry J. Kaiser Family Foundation.
- Bandura A. (1977). "Self-efficacy: Toward a unifying theory of behavioral change", *Psychological Review*, Vol. 84, No. 2, pp. 191-215.

**Developing Country Teenagers' Consumption Related Cognition Through Involvement in Television Commercial (Tvc): A Multi-Item Measurement Scale**

---

- Cliff N. (1988). "The eigen values-greater-than-one rule and the reliability of components", *The American Psychological Association, Inc.* Vol. 103, pp. 276-279.
- Caron A. and Ward S.(1975). "Gift decisions by kids and parents", *J. Advertis Res*, Vol. 15, pp. 15-20.
- Chan K. and McNeal J. U. (2002 & 2006). "Chinese children's understanding of commercial communications: A comparison of cognitive development and social learning models", *Journal of Economic Psychology*, Vol. 27, pp. 36-56.
- "Cognition — Definition of cognition in English from the Oxford dictionary", available online at: <http://www.oxforddictionaries.com>, accessed 2016-02-04.
- Corsini R. J. (1984). *Encyclopedia of Psychology* (4 volume set), Hoboken, NJ: John Wiley & Sons, Incorporated.
- Choi S. M. and Ferle C. L. (2004). "Convergence across American and Korean young adults: Socialisation variables indicate the verdict is still out", *International Journal of Advertising*, Vol. 23, No. 4, pp. 479-506, viewed 16/05/07, WARC.
- Cronbach L. J. (2004). "My current thoughts on coefficient alpha and successor procedures", *Educational and Psychological Measurement*, Vol. 64, pp. 391-418.
- Dotson M. J and Hyatt E. M. (2005). "Major influence factors in children's consumer socialisation", *Journal of Consumer Marketing*, Vol. 22, No. 1, pp. 35-42, viewed 20/12/07, Emerald Group Publishing Limited. Business Source Premier.
- Daniel B. W. (1971). "Family and media influences on adolescent consumer learning", *American Behavioral Scientist*, Vol. 14, pp. 415-27.
- D. Roedder John (1999). "Consumer socialization of children – A retrospective look at twenty-five years of research", *Journal of Consumer Research*, Vol. 26 (December), pp. 183-213.
- Donohue T. R., Henke L. L. and Donohue W. A. (1980). "Do kids know what TV commercials intend?", *J. Advertise Res*, Vol. 20, pp. 51-57.
- Eastin M. S.(2005). "Teen internet use: Relating social perceptions and cognitive models to behavior", *Cyber Psychology & Behaviour*, Vol. 8, No. 1, pp. 62-75.
- Field A. (2009). *Discovering Statistics Using SPSS* (3rd ed.).
- Furr R. M. (2010). *Core Principles, Best Practices, and an Overview of Scale Construction*. Sage Publication Inc.
- Fabrigar L. R., Wegener D.T., MacCallum R. C. and Strahan E. J. (1999). "Evaluating the use of exploratory factor analysis in psychological research", *The American Psychological Association, Inc.* pp. 272-299.
- Gruber E. and Thau H. (2003). "Sexually related content on television and adolescents of color: Media theory, physiological development, and psychological impact", *The Journal of Negro Education*, Vol. 72, No. 4, pp. 438-456.
- George D. and Mallery P. (2003). *SPSS for Windows Step by Step: A Simple Guide and Reference* —11.0 Update (4th ed.), Boston: Allyn & Bacon, p. 231.
- Gliem J. A. and Gliem R. R. (2003). "Calculating, interpreting, and reporting cronbach's alpha reliability coefficient for likert-type scales", *Midwest Research to Practice Conference in Adult, Continuing, and Community Education*.
- Haq R. M. and Rahman S. H. (2010). "A multi-item measurement scale of consumption related cognition through RTV involvement of teenagers in a developing country".
- Haq R. M. (August 2010). "Role of reality TV as a consumer socialization agent of teenagers in a developing country", Thesis for the degree of Doctor of Philosophy of Marketing.
- Hite R. E. and Eck R. (1987). "Advertising to children: Attitudes of business vs. consumers", *J. Advertis Res*, Vol. 27, pp. 41-53.
- Hurley A. E., Scandura T. A., Schriesheim C. A., Brannick M. T., Seers A., Robert J., Vandenberg R. J., and Williams L. J. (1997). "Exploratory and confirmatory factor analysis: Guidelines, issues, and alternatives", *Journal of Organizational Behavior*, Vol. 18, pp. 667-683.
- Hutcheson G. and Sofroniou N. (1999). *The Multivariate Social Scientist*, London: Sage.
- Kaiser H. F. (1974). "An index of factorial simplicity", *Psychometrika*, Vol. 39, pp. 31-36. (6043 citations as of 4/1/2016).
- Kedmy D. (Nov.18, 2014). "Global youth population swells to record 1.8 billion".
- Lowndes F. S. (September 1975). "Some communication and demographic determinates of adolescent consumer learning", *Journal of Consumer Research*, Vol. 2, pp. 80-92.
- Lueg J. E. and Finney R. Z. (2007). "Interpersonal communication in the consumer socialisation: Scale development and validation", *Journal of Marketing Theory & Practice*, Vol. 15, No. 1, pp. 25-39.
- "Live Bangladesh population clock 2017 — Population of Bangladesh today", available onlien at: <https://www.population.com/country/Bangladesh>.
- Moschis G. P. and Churchill G. A. (1978). "Consumer socialization: A theoretical and empirical analysis", *Journal of Marketing Research*, Vol. 15, pp. 559-609.

**Developing Country Teenagers' Consumption Related Cognition Through Involvement in Television Commercial (Tvc): A Multi-Item Measurement Scale**

---

- Miller J. H. and Busch P. (1979). "Host selling vs. premium TV commercials: An Experimental evaluation of their influence on children", *J Market Res*, Vol. 16, pp. 323-32.
- Martin M. C. and Gentry J. W. (1997). "Stuck in the model trap: The effects of beautiful models in ads on female pre-adolescents and adolescents", *Journal of Advertising*, Vol. 26, pp. 19-34.
- McLeod J. M. and O' Keefe G. J. Jr. (1972). "The socialization prospective and communication behavior", In G. Kline & P. Tichenor (Eds.), *Current Perspectives in Mass Communication Research*, Beverly Hills, CA: Sage.
- Moschis G. P. and Smith R. B (1985). "Consumer socialization: Origins, trends and directions for future research", *Journal of Historical perspective in Consumer Research*, pp. 275-281.
- Maslow A. H. (1943). "A theory of human motivation", *Psychological Review*, Vol. 50, No. 4, pp. 370-96, available online at: [psychclassics.yorku.ca](http://psychclassics.yorku.ca).
- Moschis G. P. and Moore R. L. (1978). "An analysis of the acquisition of consumer competencies among adolescents", *Journal of Consumer Affairs*, Vol. 12, No. 2, pp. 277-292.
- MacCallum R. C., Widaman K. F., Zhang S. and Hong S. (1999). "Sample size in factor analysis", *Psychological Methods*, Vol. 4, No. 1, pp. 84-99.
- Moschis G. P. and Churchill Jr G. A. (1978). "Consumer socialisation: A theoretical and empirical analysis", *Journal of Marketing Research (JMR)*, Vol. 15, No. 4, pp. 599-609.
- Oates C., Blades M. and Gunter, B. (2002). "Children and television advertising: When do they understand persuasive intent?" *Journal of Speech and Hearing Research*, Vol. 31, pp. 466-474.
- Oxford English Dictionary* (2nd Edition, CD-ROM Version 3.00), Oxford University Press, 2002.
- Piaget J. (1970). "The stages of the intellectual development of the child", in: Mussen P. H. (Ed.), *Reading in Child Development and Psychology*, New York: Harper and Row.
- Patel G. and Jain R. (2015). "Impact of TV advertisement on youth buying behavior", *Pioneer Journal of IT and Management*.
- Robertson T. S. and Rossiter J. R. (1974). "Children and commercial persuasion. An attribution theory analysis", *Journal of Consumer Research*, Vol. 5, pp. 599-609.
- Rossiter J. R. and Robertson T. S. (1976). "Canonical analysis of developmental, social and experimental factors in children's comprehension of television advertising", *J. Genet. Psychol.*, Vol. 129, pp. 317-327.
- Razzaque M. A. (2009). "Attitude towards TV advertisements: The case of the Bangladeshi Tween-agers", in: *ANZMAC 2009 Conference Proceedings: Australia New Zealand Marketing Academy, Melbourne, Australia*, Melbourne, Australia, 30 November 2009-02 December 2009
- R. A. Clay. (2000,September). "Advertising to children: Is it ethical?", *Monitoron Psychology*, Vol. 31, No. 8, available online at: <http://www.apa.org/monitor/sep00/advertising.html>.
- Sheikh A. A., Prasad V. K. and Rao T. R. (1974). "Children's TV commercials: A review of research", *J. Commun.*, Vol. 24, pp. 126-136.
- Selman R. L. (1980). *The Growth of Interpersonal Understanding*, New York: Academic Press.
- Schiffman L., Bendall D., O'cass A., Paladino A. and Kanuk L. (2005). *Consumer Behavior*, Pearson Education Australia, China.
- Stevens J. P. (2002). *Applied Multivariate Statistics for the Social Sciences* (4th ed.), Hillsdale, NJ: Erlbaum.
- Tay L. and Jebb A. (2017). "Scale development", in: S. Rogelberg (Ed.), *The SAGE Encyclopedia of Industrial and Organizational Psychology* (2nd ed.), Thousand Oaks, CA: Sage.
- Ul Abideen Z. and Salaria R. (2009). "Effects of television advertising on children: With special reference to Pakistani urban children", MPRA Paper No. 22321, available online at: <https://mpra.ub.uni-muenchen.de/22321>.
- Valkenburg P. M (2000). "Media and youth consumerism", *Journal of Adolescent Health*, Vol. 27, pp. 52-56.
- Ward S. and Wackman D. (1974). "Consumer socialisation: Initial study results", *Advances in Consumer Research*, Vol. 1, No. 1, pp. 120-125.
- Ward M. and Rivadenyra R. (1999). "Contributions of Entertainment Television to Adolescents' sexual attitudes and expectations: The role of viewing amount versus viewer involvement", *The Journal of Sex Research*, Vol. 36, No .3, pp. 237-250.
- Zimmerman F. J. and Christakis D. A. (2005). "Children's television viewing and cognitive outcomes: A longitudinal analysis of national data", *Archives of Pediatrics and Adolescent Medicine*, Vol. 159, No. 7, pp. 619-626.
- Available online at: <http://www.google.com/search?q=adolescent+population+worldwide+2017&oq=adol&aqs=chrome.l.69i5913j0j69i57j0.5270j0j7&sourceid=chrome&ie=UTF-8#q=adolescent+age+range>.