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Content Analysis of Iranian College Students' Dreams: Comparison With American Data

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This article analyzes gender differences in the dream content of Iranian college students and compares the findings with normative American findings and with findings from studies of Indian and Japanese college students. The study utilized 218 dream reports collected with the Most Recent Dream method from 103 females and 115 males at the University of Tehran in Tehran. In general, the Iranian findings are similar to findings in the American, Indian, and Japanese studies. However, there were differences from the American norms that were sometimes similar to differences also found in Indian and Japanese college students, which may reflect cultural differences between Eastern and Western cultures. Future investigations with larger samples may reveal further the main interests and concerns of Iranian college students and help develop a better understanding of cross-cultural similarities and differences in dream content.

Keywords: dream content, gender differences, cross-cultural differences

The first extensive dream content analysis was published in 1966 by [Calvin Hall and Robert Van de Castle \(1966\)](#). In addition to describing their scoring system in a very detailed way, they included 1,000 dream reports from 100 females and 100 males collected between 1948 and 1952 at two different American universities in Ohio. These dreams were analyzed for categories such as settings, number and identity of dream characters, and types of social interaction. The goal of these authors was to describe dream content very generally, with a primary focus on gender differences. They found that men report twice as many male characters as female characters in their dreams, while women dream about males and females equally. Furthermore, outdoor settings, unknown characters, physical aggression, and sexual interactions are more frequent in male dreams than female dreams. [Hall, Domhoff, Blick, and Weesner \(1982\)](#) repeated the original study 30 years later

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with dream reports from the University of Richmond in Virginia and found that gender differences are very stable and that certain dream characteristics do not change.

The opportunity for comparing dream samples from different countries and cultures has been provided by the publication of guidelines for dream content analysis based on large samples that provided normative data, clear coding principles, and satisfactory intercoder reliability. Many of the studies from a wide range of countries based on these guidelines were reviewed in Domhoff (1996). The relationship between cognitive style and dream reports has been demonstrated at the individual (Domhoff, 2003) and social (Punamaki & Joustie, 1998) levels. As a result, dream reports have been used for showing cultural differences with interesting results that are in agreement with the societies' cultures (Domhoff, 1996). In addition, within societies, gender differences also were in agreement with the characteristics of both sexes. For instance, when awake, the level of thoughts related to sexuality and physical aggression in men is higher than that of women. The same differences in dream content of each sex are seen in several different cultures. These findings support the principle of continuity, which states that dreams reflect conceptions, concerns, and interests in waking life (Hobson & Schredl, 2011). Domhoff (2011) points out that although there is often continuity of dream content with waking behavior, sometimes there is only continuity between dream content and waking thought.

For the purposes of this article, the findings from two Asian countries (India and Japan) will be briefly discussed based on accounts in Domhoff (1996), because the original studies were not accessible in Iran. In India, three studies have been performed (Grey & Kalsched, 1971; Prasad, 1982; and Bose & Pramilia, 1993). In Grey and Kalsched's study, the male/female percentage was 71.29% for college men and 46.54% for college women. This study yielded findings that were not significantly different from American norms. Other findings, however, were obtained that from a cultural point of view may be specific. In Prasad's (1982) research it was shown that the probability that Indian men and women report known settings is higher than that of American men and women. On the other hand, the probability that Americans see themselves in indoor settings is higher. Indians (females and males) dream about known characters more than Americans. There is a higher probability that Indians see themselves in known situations, are interacting with family members and other relatives, are witnessing aggressive acts rather than being involved in them, report dreams about food and nature, and experience happiness in their dream reports. Bose and Pramilia (1993), in comparison to American studies, found more known settings and known characters, but no difference in terms of successes and failures, misfortunes/good fortunes, and emotions. Based on the evidence in these three studies, we can conclude that the dream reports from Indian college students of Indian universities seem very similar to those of American college students, except that Indians are more likely to be interacting with known characters in familiar settings.

A study by Yamanaka, Morita, and Matsumoto (1982) in Japan reported many similar findings to the Hall and Van de Castle norms, but some differences were found that could be culturally based. For example, Japanese saw more characters in their dreams, but reported seeing fewer animals. In addition, Japanese, like Indians, reported more known characters in their dreams. There is also a lower incidence of

aggression and sexuality in the dream reports from Japanese students. Another study by Domhoff, Nishikawa, and Brubaker (2004) found high male/female percentage in three separate samples of Japanese women.

In summary, studies that have used the Hall and Van de Castle coding system for comparing dream samples from different cultural groups have demonstrated that general dream characteristics are often similar among these groups, but that there are also differences that could be related to unique cultural characteristics. These findings and stable gender differences in dream contents support the continuity principle since, for instance, a meta-analysis by Schredl, Sahin, and Schäfer (1998) concerning gender differences in dreams and in waking behavioral differences shows similar findings such as more aggressiveness and sexual relationships in men.

The purpose of this study was first to compare the dream report samples from Iranian college students with those of American college students (Hall & Van de Castle, 1966) using several categories, including dream characters, social relationships in dreams, dream emotions, situations in dreams, dream strivings, and misfortunes/goodfortunes in dreams. A second purpose was to perform analyses looking for gender differences and to focus on the effects of culture in order to compare them with those obtained in American findings. Considering the fact that Iran and the United States have different histories and cultures, although Iranians have experienced rapid economic growth in the last decades and this phenomenon itself may have an effect on Collectivist-Individualist cultural orientations (Hamamura, 2012), it was anticipated that there would be some differences between the American normative findings, basically coming from an individualistic culture (e.g., Gregg, 2005; Hofstede, 1980; Kim & Markus, 1999; Markus, & Kitayama, 1991), and the Iranian findings, encompassing collectivist beliefs, values, and social practices (Diener, & Lucas, 2004; Gregg, 2005), and that any differences in the Iranian findings might be similar to those found in India and Japan, since these countries are also collectivist (e.g., Tu, Lin, & Chang, 2011). Therefore, it is expected that Iranian students' dream contents include higher percentages of familiar characters and family members.

METHOD

Participants

Participants in the present research were 218 undergraduate college students with different disciplinary majors at the University of Tehran, 103 females and 115 males. The mean age of women was 21.78 years ($SD = 2.69$) and the mean age of men was 21.86 ($SD = 2.75$). The dream reports from men (102.41 words) were longer than those reported by women (89.5 words), which was a significant difference [$t(216) = 2.21, p < .05$]. However, the content indicators used in the Hall and Van de Castle scoring system correct for dream length, as shown in studies reported in Domhoff (2003).

Instruments and Research Procedure

To begin with, a standard “most recent dream” form was translated into Farsi. During the screening phase, the criteria for excluding dream reports from use in the analysis were (1) dreams with less than 50 words or more than 300 words, which is the procedure followed by Hall and Van de Castle (1966) in their normative study; (2) dreams with a date of occurrence 6 months earlier than the date of collection, which eliminates possible recurrent, earliest, and highly memorable past dreams because the focus of this study is on current dreams; (3) dreams from individuals whose native language was not Farsi; and (4) dreams that appeared to be made up based on the dream content, a procedure also followed by Domhoff, Meyer-Gomes, and Schredl (2006) in their study of the dreams of German college students. These four criteria were independently considered in all eliminated 241 dream reports in men and 89 dream reports in women. From the eliminated men’s dream reports 92 dream reports related to the first criterion, 13 for the second, 130 for the third, and 6 for the fourth criterion. From the eliminated women’s dream reports, 59 dream reports related to the first criterion, 11 for the second, and 19 for the third criterion. The remaining dream reports were scored utilizing the Hall and Van de Castle scoring system, as it is presented and explained in detail on dreamresearch.net (<http://www2.ucsc.edu/dreams/Coding>) for characters, social interactions, activities, emotions, settings, striving, good fortunes/misfortunes, and descriptive elements. The data were analyzed utilizing DreamSAT software, a Microsoft Excel file which can be downloaded online (Schneider & Domhoff, 1999). This program makes use of the content indicators, based on percentages and ratios, which have often been used in previous research using this scoring system. For example, the male/female percent is determined by dividing the number of male characters by the sum of male and female characters. For calculating the difference between men and women, Cohen’s *h* measure was computed by means of DreamSAT.

RESULTS

Test–Retest Reliability

Utilizing a reliability testing procedure used in a study of German college dream reports by Domhoff et al. (2006), 30 of the dream reports were coded twice by the same scorer, with a 3-month interval in between to allow sufficient forgetting of the details of the first coding, and the coefficient of agreement was computed between the two scores. The results from this computation are depicted in Table 1. Note that some of the categories (like aggressive interaction) are conformed by combining different individual codes. In general, high test–retest reliability was found.

Comparison Between Iranian and American Dreams

As depicted in Table 2, it can be observed that Iranian dream content in comparison to that of Americans shows high similarities and also considerable

Table 1. Test–Retest Reliability of Main Categories' Computation

| Categories | Agreement Coefficient % |
|--------------------------|-------------------------|
| Number of characters | 100 |
| Gender of character | 90.56 |
| Identity | 98.11 |
| Age | 100 |
| All character components | 88.68 |
| Aggressive Interaction | 69.56 |
| Friendly Interaction | 72.72 |
| Sexual Interaction | 100 |
| Successes | 100 |
| Failures | 71.42 |
| Misfortunes | 100 |
| Good Fortunes | 66.66 |
| Emotion | 79.31 |

differences. Iranian female and male undergraduate college students in comparison to their American counterparts reported a much higher percentage of known people and family members among their dream characters.

Moreover, Iranians in comparison to Americans see more dead and imaginary characters in their dreams. Regarding social interaction, the level of aggression toward women in the dreams of Iranian males and females is lower than that in American college students' dreams. Male Iranian college students in comparison to their American counterparts were more prone to initiate friendly relationships and they see more friendly relationships with women. Additionally, in the dreams of Iranian college students in comparison to those of American counterparts, there is less sexual relationship and negative emotions. Also, more bodily good fortunes and misfortunes and less negative emotions can be observed in the dream reports of Iranian college students. Finally, less successes, familiar settings, and aggression are observed in dreams of Iranian female college students, in comparison to their American counterparts.

Dream Gender Differences

In this sample of Iranian college students, several gender differences were observed, which are depicted in [Table 3](#). These differences, in most instances, replicate gender differences found in the American sample.

However, as also shown in [Table 3](#), Iranian female college students see more known people and family members in their dreams in comparison to their male Iranian counterparts. Likewise, in comparison to their female Iranian counterparts, Iranian male college students, reported higher levels of friendly interactions and A/C index. Both Iranian males and females reported more instances of friendly relationships with the opposite sex rather than same sex in their dreams. Finally, in comparison to their female Iranian counterparts, Iranian male college students, reported higher levels of outdoor setting, success, and good fortunes as well as dreams with at least one aggression.

Table 2. Comparison Between Iranian College Students' Dreams With Hall and Van de Castle's (1966) Findings

| Categories | Iranian male | American male | <i>h</i> | <i>p</i> | Iranian female | American female | <i>h</i> | <i>p</i> |
|----------------------------|--------------|---------------|----------|----------|----------------|-----------------|----------|----------|
| Characters | | | | | | | | |
| Male/female percent | 69% | 67% | +.02 | .60 | 45% | 48% | -.07 | .47 |
| Familiarity percent | 56% | 45% | +.22 | .001** | 74% | 58% | +.34 | .001** |
| Friends percent | 32% | 31% | +.01 | .88 | 31% | 37% | -.11 | .12 |
| Family percent | 22% | 12% | +.28 | .001** | 40% | 19% | +.46 | .001** |
| Dead and imaginary percent | 2% | 0% | +.14 | .03* | 3% | 1% | +.16 | .02* |
| Animal percentage | 9% | 6% | +.10 | .11 | 6% | 4% | +.09 | .21 |
| Social interaction | | | | | | | | |
| Aggression/friendliness | 58% | 59% | -.02 | .84 | 51% | 51% | -.01 | .91 |
| Befriender percent | 68% | 50% | +.36 | .02* | 54% | 47% | +.14 | .43 |
| Aggressor percent | 43% | 40% | +.06 | .63 | 37% | 33% | +.09 | .62 |
| Physical aggression | 50% | 50% | 00 | 1.00 | 47% | 34% | +.28 | .08 |
| A/C index | 37% | 43% | +.06 | — | 19% | 24% | .10 | — |
| F/C index | 23% | 21% | +.04 | — | 21% | 22% | -.02 | — |
| S/C index | 2% | 6% | -.11 | — | 1% | 1% | -.01 | — |
| Aggression toward men | 32% | 28% | — | — | 26% | 22% | — | — |
| Aggression toward women | 7% | 17% | — | — | 7% | 14% | — | — |
| Friendliness toward men | 13% | 17% | — | — | 30% | 24% | — | — |
| Friendliness toward women | 46% | 29% | — | — | 13% | 15% | — | — |
| Setting percent | | | | | | | | |
| Indoor setting | 50% | 48% | +.02 | .83 | 70% | 61% | +.15 | .15 |
| Familiar setting | 61% | 62% | -.01 | .94 | 57% | 79% | -.46 | .001** |
| Self-concept | | | | | | | | |
| Self-negativity | 67% | 65% | +.05 | .55 | 73% | 66% | +.15 | .15 |
| Bodily misfortune | 52% | 29% | +.46 | .002** | 45% | 35% | +.20 | .19 |
| Negative emotions | 67% | 80% | -.32 | .005** | 75% | 80% | -.12 | .26 |
| Dreamer success | 39% | 51% | -.24 | .25 | 22% | 42% | -.43 | .10 |
| Torso/anatomy percent | 25% | 31% | -.13 | .41 | 33% | 20% | +.29 | .06 |
| Dreams with at least one: | | | | | | | | |
| Aggression | 47% | 47% | 0 | .99 | 30% | 44% | -.30 | .006** |
| Friendliness | 37% | 38% | -.02 | .87 | 34% | 42% | -.17 | .12 |
| Sexuality | 3% | 12% | -.32 | .002** | 2% | 4% | -.10 | .35 |
| Misfortune | 37% | 36% | +.01 | .95 | 37% | 33% | +.09 | .39 |
| Good Fortune | 13% | 6% | +.24 | .02* | 6% | 6% | +.01 | .93 |
| Success | 9% | 15% | -.20 | .06 | 5% | 8% | -.11 | .29 |
| Failure | 15% | 15% | -.02 | .87 | 14% | 10% | +.12 | .27 |
| Striving | 21% | 27% | -.14 | .16 | 16% | 15% | +.02 | .82 |

* $p < 0.05$. ** $p < 0.01$.

DISCUSSION

In general, findings of the present research bear much similarity to American norms. For instance; the male/female percent in the dreams of Iranian and American college students was approximately equal. Likewise, the results regarding aggression support a high similarity between the Iranian and American cultures. However, differences between these two populations were also observed. In their dreams, Iranian male and female college students, in comparison to their American counterparts, see significantly more known people and family members. This finding is consistent with findings obtained in India (Grey & Kalsched, 1971; Prasad, 1982; and Bose & Pramilia, 1993) and Japan (Yamanaka et al., 1982), which seems

Table 3. Gender Differences in Dream Content of the Iranian Sample Group

| Categories | Iranian male | Iranian female | <i>h</i> | <i>P</i> |
|--|--------------|----------------|----------|----------|
| Characters | | | | |
| Male/female percent | 69% | 45% | + .05 | .001** |
| Familiarity percent | 56% | 74% | - .39 | .001** |
| Friends percent | 32% | 31% | + .01 | .93 |
| Family percent | 22% | 40% | - .39 | .001** |
| Dead and imaginary percent | 2% | 3% | - .10 | .26 |
| Animal percent | 9% | 6% | + .10 | .27 |
| Social interaction | | | | |
| Aggression/friendliness | 58% | 51% | + .15 | .29 |
| Befriender percent | 68% | 54% | + .28 | .18 |
| Aggressor percent | 43% | 37% | + .11 | .58 |
| Physical aggression | 50% | 47% | + .05 | .90 |
| A/C index | 37% | 19% | + .41 | — |
| F/C index | 23% | 21% | + .05 | — |
| S/C index | 2% | 1% | + .02 | — |
| Aggressiveness toward men | 32% | 26% | + .13 | — |
| Aggressiveness toward women | 7% | 7% | + .13 | — |
| Friendliness toward men | 13% | 30% | - .35 | — |
| Friendliness toward women | 46% | 13% | + .70 | — |
| Setting percent | | | | |
| Indoor setting | 50% | 70% | - .41 | .002** |
| Familiar setting | 61% | 57% | + .07 | .61 |
| Self-concept | | | | |
| Self-negativity percent | 67% | 73% | - .12 | .35 |
| Bodily misfortunes percent | 52% | 45% | + .14 | .45 |
| Negative emotions | 67% | 75% | - .19 | .15 |
| Dreamer success | 39% | 22% | + .37 | .22 |
| Torso/anatomy percent | 25% | 33% | - .17 | .42 |
| Percentage of dreams with at least one: | | | | |
| Aggression | 47% | 30% | + .35 | .01* |
| Friendliness | 37% | 34% | + .07 | .60 |
| Sexuality | 3% | 2% | + .10 | .48 |
| Misfortune | 37% | 37% | - .03 | .84 |
| Good Fortune | 13% | 6% | + .25 | .06 |
| Success | 9% | 5% | + .15 | .23 |
| Failure | 15% | 14% | + .03 | .80 |
| Striving | 21% | 16% | + .14 | .31 |

* $p < 0.05$. ** $p < 0.01$.

very likely to reflect differences in the formation of the self between Eastern and Western societies. Eastern cultures are thought to promote an interdependent and embedded self, while Western cultures are often said to encourage an independent and encapsulated self (Gregg, 2005; Kim & Markus, 1999; Markus, & Kitayama, 1991). Values, norms, and beliefs in Western societies place a prominent emphasis on individual independence and self-autonomy (e.g., Zahn-Waxler, Friedman, Cole, Mizuta, & Hiruma, 1996); while, in Middle-Eastern countries, like Iran, emphasis is on commitment of self toward the harmony and coherence of the group (Diener, & Lucas, 2004; Gregg, 2005).

The Iranian culture can thus be said to be a collectivist culture (Bierbrauer, Meyer, & Wolfradt, 1994; Hofstede, 1980). Among Iranian families, in comparison to families in Western cultures, a clear hierarchy in social status exists between

adults and children, accompanied by an emphasis on respect toward parents (Behzad, 1994), such that it is socially expected that children show high respect toward adults and women toward men (Beeman, 2001). Being respectful in social situations is highly emphasized (Beeman, 1976). Friedl (2004), a well-known anthropologist states that "...even though it is emphasized that Iranian boys play outside the home and become socialized, the girls stay inside the home...." In Iran, women should not sexually stimulate men by using makeup (Moghissi, 2005). The use of makeup by women has caused public disagreement and tension, since based on Islamic doctrine and teachings, women are encouraged to use makeup only for their husbands in the privacy of their homes (Mayer, 2005). Perhaps a reason why Iranian students reported more dreams from the "indoor setting" category (as opposed to "outdoor setting" category), or their dreams tended to be shorter than those of their American counterparts, can be associated with these cultural contexts. Iranians seem to be less worried about acculturation influences, especially from the West, than people in other Islamic countries like Egypt or Jordan (Moaddel, & Azadarmaki, 2002), although profound social structural changes at the population level have been experienced during the past 25 years (Friedl, 2009). Traditional cultural beliefs and practices, including women's literacy, age of marriage, child bearing, and women's participating in the labor force, have been seriously challenged, as shown by Abbasi-Shavazi, McDonald, and Hossein-Chavoshi's (2008a) research study involving four Iranian provinces (Gilan, Yazd, West Azarbaijan, and Sistan Baluchestan). For instance, women's literacy at national levels have drastically increased from 36% in 1976 to 80% in 2006 (Abbasi-Shavazi, Morgan, Hossein-Chavoshi, & McDonald, 2009), and the number of women becoming eligible to enter college has surpassed that of men (Abbasi-Shavazi et al., 2009), leading to a new generation of educated young women with an Iranian version of a feminist orientation (Kurzman, 2008) and a consequent decline of a patriarchy-oriented society (Kian-Thiébaud, 2005); age of marriage is increasing (Abbasi-Shavazi et al., 2009); birth rates have diminished from six children per family, in 1985 to 1.9, in 2006 (Hoodfar, 2008); and women reported the desire to work to become economically independent (Abbasi-Shavazi et al., 2009). Notwithstanding these social changes, some culturally oriented patterns of thinking and action have remained highly prominent in Iran. For example, consanguineous marriage is still highly prevalent (above 40% of marriages) (Abbasi-Shavazi, McDonald, & Hossein-Chavoshi, 2008b) and religious beliefs continue to be highly important for the Iranian people (Davaran, 2009).

Other differences between the Iranian and American cultures were also observed. First, male Iranian college students experienced more good fortunes and positive emotions in their dreams than their American counterparts; however, at the same time, misfortunes in the dreams in the Iranian male sample was higher in comparison to American male college students, especially on bodily misfortunes. Corroborating these findings, a cross-cultural research (Diener & Lucas, 2004) involving several cultures regarding parental expectations about their children's experience and expression of emotions can be elucidating. In this study, Iranian parents highly desired their children not to be fearful, and also highly expected their children to inhibit their aggression, while for the regulation of other emotions, Iranian parents ranked in the middle.

Second, two kinds of differences were of interest. To begin with, Iranian female college students reported shorter dreams than Iranian male students, whereas there were no differences found in some previous studies in other countries (e.g., Krippner & Weinhold, 2001; Schredl et al., 1998; Tartz, Baker, & Krippner, 2006), and the dream reports were longer for women than men in the United States and Canada (e.g., Hall & Van de Castle, 1966; Bursik, 1998). This lack of agreement might be indicative of cultural differences between the Iranian college population and other populations of college students. For example, alexitymics report shorter dreams than nonalexitymics (De Gennaro et al., 2003), and traumatized children reported much longer dreams than the control group (Valli, Revonsuo, Palkas, & Punamaki, 2006). However, it may be that this finding was obtained due to the fact that the researcher who collected the dream reports in this study was male and Iranian female college students were not at ease to disclose their dreams under this condition.

It is also noteworthy that outdoor settings in the dreams of Iranian females were even less frequent than in the dreams of American females. This may reflect differences in the lives and expected futures of Iranian and American women, a possibility worthy of further study in future research. The lesser levels in the “outdoor setting” category of dream content of Iranian women may be a reflection of the different lifestyle of Iranian women in comparison to women in Western societies (Abdollahi & Mann, 2001). Iranian women must cover themselves and preferably do not present themselves in public or present themselves in public to a lesser extent than Western women.

Differences from the Hall and Van de Castle (1966) norms were also found in some other studies (e.g., Rainville & Rush, 2009; Tartz et al., 2006). Rainville & Rush do not provide an explanation for this finding; however, Tartz et al. indicate that their female sample may not be an appropriate sample in terms of representing the respective population.

Considering the fact that the present research on dream content is the first one carried out in the Islamic Republic of Iran, and given that a larger sample size may yield more accurate results, the present research needs replication. Although test–retest reliability in the present research is high, it would be appropriate to use computations from more than one scorer in order to build confidence in scoring reliability.

Caution in the generalizability of college students’ dream contents from the city of Tehran to the Iranian population should be considered, although young adults (<30) constitute the majority of the Iranian population (64.2%) (Statistical Center of Iran, 2011). This sector of the Iranian population has high levels of education, such that 84% of Iranian young adults are registered at colleges and universities throughout the country (Basmenji, 2005). The number of college students presently registered in the city of Tehran has been estimated to be 708,449, which translates to 20.41% of Iranian college students throughout the country (Statistical Center of Iran, 2011). Based on these statistics, it can be said that young adults make up the majority of the Iranian population and a great number of these young adults are college students. Therefore, the sample participating in the present research represents an important sector of the Iranian population of college students.

In summary, the findings of the present study provide empirical evidence supporting the cross-cultural stability of several dream characteristics that have been obtained through decades of research (Domhoff, 1996). However, in several instances in which there are significant cultural differences in waking states between Iranians and Americans, these same differences were reflected in the dream content from India and Japan. Thus, the findings of the present study support the continuity hypothesis (Hobson & Schredl, 2011; Schredl, 2003) between dreams and waking states. Comparing the dreams from the United States and Iran using large sample sizes may make more explicit the differences and similarities of the subjective worlds of their citizens, and would help to better interpret the findings of the present study. It also would be useful to study Iranian cultural beliefs about dreams to see if they would shed new light on the cultural differences found in this study.

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