Evaluating the Quality of a New Thematic Motivation Coding System

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Abstract

The Comprehensive Motivation Coding System for Striving Assessment (CMCS) is a new method of coding personal strivings according to the motive themes they express. The CMCS consists of 16 specific motives and 2 non-specific categories. The 16 motives include the Big Three motives of Achievement, Affiliation, and Power, as well as 13 additional motives that include, for example, Acquisition, Honesty/Integrity, Intimacy, and Self-Improvement. This coding system is a renewed motivation coding system and requires less training than earlier systems.

Two studies were conducted to examine if the CMCS works as well as those comparator systems: Murray's (1938) coding, and individual coding systems for the Big Three motives (Achievement, McClelland, Atkinson, Clark, & Lowell, 1953; Affiliation, Heyns, Veroff, & Atkinson, 1958; and Power, Winter, 1992). In Study 1, personal strivings were coded using three distinct motivation coding systems: the CMCS, Murray's scoring, and the Big Three motive coding systems. To assess the quality of the CMCS, three analyses were conducted: inter-rater reliability, frequency analysis, and correlations between the CMCS and the other two coding systems. The inter-rater reliabilities of the categories in the CMCS mostly ranged from moderate to high; the frequencies of similar motive categories between the CMCS and Murray's coding were very close; and the correlations between CMCS motives and similar motives in the other two coding systems were moderate to high.

In Study 2, the same three coding systems were applied to responses to five pictures from the Thematic Apperception Test (TAT; Murray, 1943). Similar to the results in Study 1, the frequencies of similar motives coded using the CMCS and Murray's coding were very close; as well, correlations between CMCS motives and similar motives in the other two coding systems were mostly moderate to high. These results demonstrate the promise of the CMCS as an effective, more up-to-date and easier-to-use motivation coding system for thematic measures.

Introduction

The CMCS is a Comprehensive Motivation Coding System developed to code personal strivings (Xu, Mellor, Xu, & Duan, 2008). This coding system includes seven motives drawn specifically from the Murrayan need list (Achievement, Power/Dominance, Affiliation, Acquisition, Independence/Autonomy, Organization/Order, and Sex), three motives that partly over-lapped with that system (Play and Enjoyment, Nurturance and Intimacy, and Cognizance and Novelty), six new motives (Health, Self-improvement,

Honesty/Integrity, Instrumentality, Religion/Spirituality, and Social Goodness) and two non-specific categories of Idiosyncratic and Not Enough Information. This coding system was hypothesized to possess several advantages over the existing motivation coding systems. First, compared to an individual motive coding system, it is relatively more comprehensive; second, compared to Murrayan needs, it is updated; third, compared to an extensive coding system, such as McClelland et al.'s Achievement (1953) coding system, it requires less training and is easier to use. Finally, it has a comprehensive manual which includes a definition of each motive, coding examples, coding practice and answer key, and a coding sheet we recommend. Even with these strengths, no study has been conducted to test its quality. Therefore, the present study is to investigate its quality as a motivation coding system in real research environment. This, hopefully, is a start of applying this coding system to the field of motivation assessment.

<div align="center">Study 1</div>

Purposes

The general purpose of the present study is to investigate the quality of the CMCS. For Study 1, we focused on examining how the CMCS worked compared to other two traditional coding systems when personal strivings were coded.

Methods

Participants

One hundred and twelve undergraduate students (75 females, 37 males) ranging from 18 to 23 years old (M=19.0, SD=1.2) participated in this study for extra course credit.

Measures

The Striving Assessment (Emmons, 1986) was used in this study to collect personal strivings. It consists of identical incomplete sentences like "I typically try to _____ ." Participants were asked to list 12 personal strivings in this study.

Coding

One undergraduate research assistant and one graduate student were trained to code these personal strivings using three different coding systems. The three scorings were the CMCS, the Murray's coding, and individual codings for the Big Three motives including Achievement (McClelland, et al., 1953), Affiliation (Heyns, et al., 1958), and Power (Winter, 1992). The Big Three Motive scorings includes two steps. First, raters make general judgments about if a story can be coded as a certain motive. If so, then further judgment on detailed categories is needed. If not, then the coding ends. Since personal strivings listed were just one sentence, they were not as rich as a story. Therefore, when applying the Big Three Motive scoring systems to code personal strivings in present study, only the first steps of these scorings were employed; that is, raters just made judgments about whether a personal striving fitted in any given motive or motives.

Results for Study 1

Inter-rater Reliabilities

The inter-rater reliabilities of 18 categories in CMCS mostly ranged from moderate to high, with a mean of .65. The inter-rater reliabilities of the parallel motives in the CMCS and the Murray's coding system were very close, for example, .55 vs. .56 for Achievement in these two scorings, .45 vs. .43 for Affiliation, and .77 vs. .72 for organization/order. Finally, the inter-rater reliabilities of the Big Three Motives were moderate, with a mean of .40, which was a little lower than those of CMCS motives and Murrayan needs (see Table 1).

Frequencies

Frequency analysis indicated that the frequencies for CMCS motives and the parallel Murray's motives were very close. For example, as Table 2 shows the frequency of Murray Achievement was 95, and 100 for CMCS Achievement, and Murray Order was 38, and 36 was for CMCS Organization. Thus, these two scoring systems resulted in similar frequencies between parallel motives.

Correlations

The correlations between CMCS motives and those parallel Murray motives ranged from .40 to .81, with a mean of .62. The correlations for Achievement, Affiliation, and Power were .77, .58, and .40, respectively. Correlations between CMCS Achievement and McClelland et al.'s Achievement, between CMCS Affiliation and Heyns, et al.'s Affiliation, and between CMCS Power and Winter's Power were .79, .63, and .60 (see Table 3).

In conclusion, the CMCS exhibited acceptable inter-rater reliability. The good correlations and similar frequency distributions of between CMCS motives and the parallel Murray's motives indicated the good quality of the CMCS as a motivation scoring system.

Study 2

Purposes

To further investigate the quality of the CMCS, the three coding systems were applied to code TAT stories and these three codings were compared. The TAT was used in place of the Striving Assessment so as to indicate that the coding method can be used with more than one type of motivational material, as well as to evaluate the new coding system in relation to older systems with the TAT test for which those original systems were designed.

Methods

Participants

One hundred and forty three undergraduate students (110 females, 33 males) ranging from 17 to 52 years of age (M=19.0, SD=3.0) participated in this study for extra course credit.

Measures

In previous research, when the TAT was applied, researchers did not choose all 31 pictures for a number of reasons (e.g. possible fatigue, time consuming); often, five or six pictures were chosen (Keiser & Prather, 1990). Therefore, we chose five of most frequently used pictures indicated by Keiser & Prather (1990), which were 1, 4, 6BM, 7BM, and 8GF. Picture 1 is a little boy sitting in front of a violin; picture 4 is a woman trying to hold back a man; Picture 6BM is an elderly woman who is standing by a window with her back to a young man; Picture 7 BM is a man looking at a younger man; Picture 8GF is a young woman sitting at a table and looking into the space (Murray, 1943).

Coding

One graduate student was trained to code all the TAT stories using the same three coding system as in Study 1. But in this particular study, two steps of the Big Three motive scoring systems was applied to TAT stories, rather than only step one employed in Study 1.

Results for Study 2

Frequencies

With results similar to those of Study 1, frequencies for the seven similar motives in the CMCS and Murray's coding were also very close, except for Affiliation. As can be seen in Table 2 (on the right), the frequency for Achievement coded using Murray's coding in TAT stories was 90, which was exactly the frequency of Achievement coded using the CMCS; Acquisition was 45 vs. 44; and Autonomy was 42 vs. 42.

Correlations

Again, consistent with the results in Study 1, the correlations between CMCS motives and parallel motives in the other coding systems ranged from moderate to high, except for correlations between CMCS Affiliation and Murray's Affiliation and between CMCS Affiliation and Heyns et al's Affiliation (see Table 4). The lower correlations for the Affiliation coding scales (between the CMCS and Murray's approach) in Study 2 might be due to the difference in their definitions. The Affiliation category on Murray's list is broader than the definition in the CMCS. Murray's Affiliation includes "to love" (Murray, 1938), but the Affiliation in CMCS is limited to friendship, whereas Intimacy in the CMCS includes "to love."

General Conclusion

In general, the results in both studies indicated the good quality of the CMCS. It exhibited the acceptable inter-rater reliabilities, the similar frequencies of similar motives among the three coding systems, and good correlations between similar motives coded using the CMCS, Murray's coding, and the Big Three coding systems. The results showed that for similar motives the CMCS worked as good as earlier systems of Murray's and the Big Three Motive scoring systems and the CMCS included new motives which were more relevant to modern population. All in all, the present study demonstrated the promise of the CMCS as an effective and more up-to-date motivation coding system for thematic materials, and it is easy to use.

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Table 1

Inter-rater Reliabilities on Motives Coded by Three Distinct Coding Systems (Study 1)

	CMCS	Murray's Coding	Big Three Codings
Achievement	.55**	.56**	.30**
Power/Dominance	.64**	.78**	.41**
Affiliation	.45**	.43**	.48**
Intimacy	.57**	-	-
Acquisition	.90**	.84**	-
Independence/Autonomy	.70**	.82**	-
Health	.87**	-	-
Organization/Order	.77**	.72**	-
Self-improvement	.57**	-	-
Honesty/Integrity	.64**	-	-
Instrumentality	.58**	-	-
Novelty	.87**	-	-
Religion/Spirituality	.81**	-	-
Enjoyment	.70**	-	-
Social Goodness	.40*	-	-
Sex	.91**	.88**	-
Idiosyncratic	.20*	-	-
Not enough information	.52**	-	-
Mean	.65	.72	.40

** *p* < .01.

Table 2

Frequency for Similar Motives in Strivings and TAT stories Coded Using the CMCS and Murray's Coding (Study 1 and Study 2)

Strivings[a]			TAT[b]		
	Frequency			Frequency	
Motives	CMCS	Murray's	Motives	CMCS	Murray's
Achievement	100	95	Achievement	90	90
Affiliation	90	100	Affiliation	30	107
Power/Dominance	90	82	Power/Dominance	122	109
Independence/Autonomy	25	28	Independence/Autonomy	42	42
Acquisition	21	21	Acquisition	44	45
Organization/Order	36	38	Order/Organization	4	3
Sex	6	7	Sex	19	20

[a] Personal strivings collected in Study 1; [b] TAT stories collected in Study 2

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Table 3

Correlations between Motives in the CMCS and Similar Motives in Murray's Coding System and in the Big Three Coding Systems (for Personal Strivings)

Motives	CMCS vs. Murray's Coding	CMCS vs. Big Three Codings
Achievement	.77**	.79**
Affiliation	.58**	.63**
Power/Dominance	.40**	.60**
Acquisition	.77**	-
Independence/Autonomy	.59**	-
Organization/Order	.81**	-
Sex	.43**	-
Average	.62	.67

** *p* < .01.

Table 4

Correlations between Motives in the CMCS and Similar Motives in Murray's Coding System and in the Big Three Coding Systems (for TAT Stories)

Motives	CMCS vs. Murray's Coding	CMCS vs. Big Three Codings
Achievement	.94**	.71**
Affiliation	.12	.06
Power/Dominance	.76**	.42**
Acquisition	.98**	-
Independence/Autonomy	.89**	-
Organization/Order	.49**	-
Sex	.89**	-
Average	.72	.40

** *p* < .01.