THE SCALE OF KNOWLEDGE AND AWARENESS ABOUT CHILD MOLESTERS (KACMS): VALIDITY AND RELIABILITY STUDY*

ÇOCUK CİNSEL İSTİSMARCILARINA YÖNELİK BİLGİ VE FARKINDALIK DÜZEYİNİN DEĞERLENDİRİLMESİ: BİR ÖLÇEK GELİŞTİRME ÇALIŞMASI

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ABSTRACT

The purpose of this research is to develop the Child Molesters Knowledge and Awareness Scale (KACMS) and examine the psychometric properties of the scale. Two study groups were conducted among a total of 610 (366+244) Turkish adults aged from 18 to 49. According to explanatory factor analysis results, it was found that the KACMS had two-factors and this model explained 48.80% of variance related to the attribute it measured. In confirmatory factor analysis, fit index values were found as χ^2= 132.26, df= 50 (χ^2/df= 2.64), RMSEA= .08, SRMR=.065, NFI= .94, RFI= .92, IFI= .96, CFI= .96, and TLI= .95. Factor loadings ranged from .40 to .91. In the concurrent validity, the KACMS had significant relationship with the Perceptions toward Criminals Scale (r= .64). Cronbach's alpha internal consistency coefficient was α=.94 for the whole scale, α=.96 for the grooming methods, α=.75 for the characteristics of child molesters. Corrected item-total correlations ranged from .32 to .85. According to these results, it can be said that the scale is a valid and reliable assessment instrument in order to scale knowledge and awareness level of undergraduates (school counseling, social work, psychology, pedagogy, forensic psychiatry, and other fields) who are able to work children on sexual molesters and their grooming methods.

Keywords: Sexual abuse, child molesters, offender, perpetrator, grooming methods, scale, validation, and reliability.

ÖZET

Bu çalışmanın amacı Çocuk Cinsel İstismarcılarına Yönelik Bilgi ve Farkındalık Ölçeğini (ÇCİBFÖ) geliştirmek ve psikometrik özelliklerini incelemektir. Araştırma kapsamına yaşları 18 ile 49 arasında değişen iki farklı çalışma grubunda yer alan toplam 610 (366+244) yetişkin katılımcı alınmıştır. Açımlayıcı faktör analizi sonuçlarına göre ÇCİBFÖ'nün iki boyuta sahip olduğu ve bu iki boyutlu yapının ölçtüğü özellikle ilgili toplam varyansın %48,80'ini açıkladığı görülmüştür. Doğrulayıcı faktör analizi sonucu ölçeğin uyum iyiliği değerleri χ^2= 132.26, sd= 50 (χ^2/sd=2.64), RMSEA= .08, SRMR=.065, NFI= .94, RFI= .92, IFI= .96, CFI= .96, TLI= .95 olarak hesaplanmıştır. Ayrıca madde faktör yükleri .40 ile .91 arasında sıralanmaktadır. Ölçüt (benzer ölçek) geçerliği çalışmasında, ÇCİBFÖ ile Suçlulara Yönelik Algılar Ölçeği arasında r= .64 pozitif ilişki tespit edilmiştir. Cronbach alfa iç tutarlık katsayısı ölçeğin bütünü için α=.94, cinsel istismara uygun hale getirme metotları (grooming) alt boyutu için α=.96 ve çocuk cinsel istismarcısının karakteristiği alt boyutu için α=.75 olarak bulunmuştur. Düzeltilmiş madde toplam korelasyon katsayıları .32 ile .85 arasında değişmektedir. Tüm bu sonuçlara göre, Çocuk Cinsel İstismarcılarıyla İlgili Bilgi ve Farkındalık Ölçeği, ileride çocuklarla çalışabilecek alanlarda eğitim gören öğrencilerin (öğretmenler, psikolojik danışma ve rehberlik, sosyal hizmet, pedagoji, psikoloji, adli psikiyatri vs. gibi) cinsel istismarcıların özellikleri ve çocuklara yaklaşma metotları konusunda bilgi ve farkındalık düzeylerini ölçmeden kullanılabilecek geçerli ve güvenilir bir ölçme aracı olduğu söylenebilir.

Anahtar kelimeler; Cinsel istismar, çocuk tacizcileri, cinsel istismarcı, cinsel istismar faili, grooming metotları, ölçek, geçerlik ve güvenirlik.

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INTRODUCTION

American Psychological Association (APA) defines that "sexual abuse is unwanted sexual activity, with perpetrators using force, making threats or taking advantage of victims not able to give consent" (APA, 2000). Sexual abuse contains psychological, sociological, medical, behavioral etc. aspects. It is one of the crimes known as dark spots in criminology. It is estimated that the real prevalence of sexual abuse is much higher, with only 15% of cases occurring (Cohen & Galynker, 2002). According to Douglas and Finkelhore's (2003) study, 9-32% of women and 5-10% of men were exposed to sexual violence during their childhood. In Turkey, according to Turkish Statistical Institute, the number of victims child of sexual violence has been increasing in 2015-2017 compared to previous years (30%). The disclosure of sexual abuse is complex and disclosing rates by the child victims are also less (Gönültaş, 2013). It is obvious that measurement tools are needed to scale knowledge level to be aware of child molesters. Thus, professionals working with children could be increased knowledge level to prevent sexual abuse.

In child molestation, an adult or older adolescent uses a child for sexual stimulation, namely "any sexual behavior toward a child by an adult" (APA, 2000). The point that makes sexual abuse dangerous and vulnerable for the child is related to the characteristics and grooming methods of child molesters (CM). CM, who were previously seen as irrational and impulsive types who cannot control their behavior, have been found to be strategic, versatile, planned, and risk-evaluator with recent studies (Gönültaş et al., 2021; Gönültaş & Sahin, 2018; McAlinden, 2006; Kaufman et al., 1998; Smallbone & Wortley, 2001; Leclerc et al., 2009). This situation makes us wonder what kind of nature do they have? For this purpose, theories on the nature of CM are applied (Ward & Siegert, 2002; Finkelhor, 1994): these individuals appear to have problems controlling their behaviors, emotions, and sexual impulses, and they lack the social interaction ability with an adult in a normal way. They are incapable of benefiting social support from the society. They tend to distort the child's behavior, perceiving the child as a false adult. For example, "she/he is close to me, so she/he must be interested in me...". Negative emotional states may cause these individuals to opportunistically turn to children to meet their sexual needs. This is uncontrolled. They can use sexual behaviors as a calming method. Also, sexual fantasies accompany certain sexual behaviors, and they help to raise one's mood (feeling grandiose). A history of crime and especially substance use is expected. In this sense, they may show delinquent behaviors once they were children and adults and may be diagnosed with behavior disorders.

In terms of CM's methods in order to approach to children, relevant research focuses on the grooming methods of the molesters (Van Gijn & Lamb, 2013). Grooming methods involve a number of deceptive methods that seem innocent and prosocial (such as establishing friendships) in order for the abuser to engage in sexual activity with the child, thus allowing the victim to obey or remain unresponsive. Common grooming methods are deception, bribery, promises, compliments, manipulation, threats, and coercion (McAlinden, 2006; Smalbone & Wortley, 2001; Kaufman et al., 1998; Craven et al., 2006). In a study conducted in the sample of Istanbul (Gönültaş, Zeyrek-Rios and Lester, 2021), CM use a child as "intermediary" to reach other children. The intermediary has been abused by the molester before, and this method serves that 1- the other children comply with the offer from their friend (intermediary) and are not suspicious (for example, "there is an uncle, he is a very good person, he gives me a ride with his car"), 2- the CM does not attract the attention of other adults and police.

These methods help the CM to prepare the child for abuse. With these methods, the CM approaches the child (becoming physically close to child), breaks his/her resistance, and manages to take it under his control (McAlinden, 2006; Ost, 2009; Finkelhore, 1994; Kaufman et al., 1998). It also ensures that the victim remains silent after abuse and re-victimization (Craven et al., 2006). In this process, the CM "learns what children like and dislikes, interests and fears, and uses this knowledge to manipulate the child to engage in sexual contact" (Singer et al., 1992). Behaviors such as threats and coercion also help the child to be under control and obey, just like persuasion-deception methods (Gönültaş, 2013; Van Gijn & Lamb, 2013). Also, abduction can be used as a tool to become physically close to the child (Gönültaş, 2018). In the process that develops towards the act of abuse, spending time with the child and engaging in prosocial behaviors such as playing games with the child, and these serve to gain the child's trust and make it easier to control him/her (Gönültaş, 2016). For this purpose, strategies such as the use of bribery, isolation of the child so that he can be vulnerable, desensitization by sexualizing and the use of force are

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followed (Plummer, 2018). Molesters can apply these methods to their parents as well as children, so that the parent becomes ineffective in protecting their child (Gönültaş, Oral, & Elitez, 2021).

CM are in an effort to approach children within the framework of the processes set out above (Gönültaş et al., 2021). For this purpose, they may want to take positions where they can interact with children. These positions such as teacher, sports teacher, course trainer, school bus driver may offer opportunities to be physically close with children (Koçtürk, 2018). These positions often take place in environments where the child is out of parental supervision, and if children are not actively supervised and protected, CM can easily "infect (becoming closest)" children through these positions.

Schools are the environments where children spend the most time apart from parental supervision, and teachers are prominent professionals in the active supervision-protection of children. For this reason, teachers should be at the forefront of professionals who should know about CM and their methods. As a matter of fact, Sanderson (2004, cited in Koçtürk, 2018) warns teachers about observing adults, especially their colleagues, who may show abusive approach and behavior to children. However, the education of teachers on sexual abuse at the undergraduate level and also in-service training, is not sufficient for sexual molesters (Tugay, 2008) and it is suggested that these trainings should be developed (Gönültaş, 2018). In this context, in order to gain the ability, first of all, it is necessary to understand the level of knowledge and awareness of professionals (especially undergraduates) who will work with children on CM and their grooming methods.

Aim of the present study

Studies to measure professionals' knowledge and awareness level related to CM and grooming methods are quite limited in the literature (Wurtele et al., 2008). One part of the "Myths About Sexual Abuse Scale" developed by Collings (1997) includes questions about common perceptions of sexual abusers in society. It has been found that teachers are generally affected by myths about sexual abuse in society (Wurtele et al., 2008). Similarly, in Turkey, the "Parent Form of the Childhood Sexual Abuse Myths Scale" developed by Koçtürk and Kızıldağ-Şahin (2020) has two sub-dimensions. The second one is "abusive characteristics". In this sub-dimension, there are 9 items measuring the myths that are common in Turkish society about molesters. In a qualitative study conducted by Kanak and Arslan (2018) with 25 preschool teachers regarding CMs, they were asked questions about the age, intimacy with children, personality traits, physical appearance, and educational status of the CMs, and they found that the participants generally had information in line with the literature. Doğan and Bayar (2018), in their study with n=216 education faculty students, applied a 17-item questionnaire to measure the level of knowledge about sexual abuse. In this questionnaire, four questions measure their knowledge about sexual abusers (gender, intimacy status, socioeconomic status, appearance). While these studies generally study awareness and attitudes of professionals working with children on the effects of sexual abuse on children, they do not specifically address CMs and their grooming methods. In this sense, it is seen that there is a need for a measurement tool to see awareness and knowledge levels about CM in order to recognize these people who cause sexual abuse. Based on this need, the present study aims to develop a measurement in order to scale about knowledge and awareness level of teachers, prospective teachers, and psychological counselor candidates who are able to work children on sexual molesters and their grooming methods.

METHODS

Participants

For this study, convenience sampling technique has been carried out for participant selection. Data was obtained from 610 education faculty students who volunteered to take part in this study. Draft scale was filled in by 366 prospective teachers, and final scale was filled in by 215 psychological counselor candidates and 29 master students in Educational Sciences. The participants were all aged between 18 and 49, with a mean age of 25.03 years. Males made up 74.75% (N = 456) of all participants, and females 25.25% (N = 154). Ethical approval was obtained from Sivas Cumhuriyet University Social Sciences Ethics Committee with 13.09.2018 and the number of 2018/3. Data collection was conducted between August-October 2021.

Instruments

Perceptions toward Criminals Scale (PCS): The PCS was developed by Gönültaş et al. (2019). It consists of 12 items

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and two factors [1. Perceptions of Moral/Personal Characteristics of Criminals (e.g., "Criminals are prone to recidivism"); 2. Perceptions of Criminals' Social Networks (e.g., "Criminals come from broken families")]. Each item required a respondent to answer on a 5-point, Likert-type scale, the degree to which the item applied to them (1= Strongly disagree, through to 5= Strongly Agree). The validity analysis of the scale was conducted on a sample of 310 students and the indices showed a good fit ($\chi2/df$=2.43, AGFI=.90, CFI=.94 GFI=.935, NFI=.90, RMSEA= .68). In addition, internal validity analyses were performed, and the scale was found to have internal validity. Cronbach's alpha internal consistency coefficient was found as α= .82 and split-half analysis coefficient was found as r=.80. In this study, Cronbach's internal consistency coefficient was found as α= .93.

Preparation of the items and data analysis

In addition to the scales mentioned above, there are also some measurement tools within the scope of child abuse in Turkey. For example, Pekdoğan (2017) wants to evaluate whether the behavior of parents towards their children is abuse via the Child Abuse Awareness Scale-Parent Form. Choo, Walsh, Chinna, and Tey (2013) developed the Child Sexual Abuse Attitude Scale. This scale was intended to evaluate whether experts (teachers) are aware of sexual abuse towards children. Almost all the same scales in this regard are related to awareness of abuse. However, it is not possible to prevent sexual abuse without knowing the child molesters (perpetrators) and their grooming methods. In this context, it is aimed to provide a measurement tool in the literature to increase the awareness of the child's molesters and their grooming methods. While preparing the items pool, we used the declarations/expressions of children who were sexually abused and publications in the field of forensic psychology (i.e., Turner & Briken, 2015; Winters & Jeglic, 2017; 2021; Winters, Jeglic, & Kaylor, 2020; Wolf, Linn, & Pruitt, 2018). First, a detailed literature review was carried out related to child sexual abuse. Especially, pedophilia (e.g. Marshall, 1997), sex offenders (e.g. Ebisike, 2007; Keenan & Ward, 2000; Quinsey, Lalumie`re, Rice, & Harris, 1995), child molesters (e.g. Hayashino, Wurtele, & Klebe, 1995), child maltreatment (e.g. Belsky, 1980), child abuse (e.g. Clark, Clark, & Adamec, 2007) victimization of sexual abuse (e.g. Finkelhor, 1979), risk factors for sexual abuse (e.g. Assink et al., 2019), grooming methods (e.g. Pollack & MacIver, 2015) and crime theory (e.g. Gottfredson & Hirschi, 1990) were reviewed in-depth. Secondly, to constitute an item pool, the previous same scales were utilized, and suitable items were included in the scale or they were redesigned to fit the subject and the rest of the items were created by the researchers. Eventually 66 items were generated. These items were analyzed by four associated professors in social work, psychological counseling, and child development. Upon receiving comments from the four experts through face-to-face conversations and mailing, some items were removed, wordings of a couple of items were altered, some items were shortened, and the order of the items were rearranged. As a result, 40 items were decided to be appropriate for the draft scale. The items in the scale were arranged to have a 7-point Likert-type rating (1=Strongly disagree, 2= Disagree, 3= Somewhat disagree, 4= Neutral, 5= Somewhat agree, 6=Agree, and 7=Strongly agree). A pilot study was conducted on a sample of 43 participants to test the intelligibility and readability of the items. After it was determined that there was no problem, the actual data collection study was started. For structural validity of the KACMS, exploratory factor analysis (EFA) was performed on the data collected from the 366 prospective teachers, and confirmatory factor analysis (CFA) was performed on the data collected from the 215 psychological counselor candidates and 29 master students in Educational Sciences. EFA was used where there is no knowledge among the items of the KACMS, that is, how many factors there are between the items and which factors are determined by which items (Orçan, 2018). CFA was used to test the validity of the structure obtained after EFA (Worthington & Whittaker, 2006). With CFA, the existence of a previously proven structure is investigated with a new data set (Orçan, 2018). In SEM model, the application of RMSEA, CFI, and TLI is heavily contingent on a set of cutoff criteria. Browne and Cudeck (1993) suggested that the RMSEA value of < .05 indicates a "close fit," and that < .08 suggests a reasonable model–data fit. Baumgartner and Homburg (1996) recommended that TLI > .90 indicates an acceptable fit. p<.01 is based as the level of significance. Perceptions toward Criminals Scale was used for concurrent validity. Concurrent

validity indicates the amount of agreement between two different assessments. Generally, one assessment is new while the other is well established and has already been proven to be valid (Adams et al., 2014). For the validity and reliability analysis of the KACMS, a statistical computer program package was used (SPSS and AMOS).

FINDINGS
Construct Validity:

Exploratory Factor Analysis (EFA): In order to assess the appropriateness of the data for factor analysis, Kaiser-Meyer-Olkin (KMO) coefficient was calculated, and Bartlett Test of Sphericity was applied. Kaiser-Meyer-Olkin (KMO) measure of sampling adequacy was .93 and there was a significant result on Bartlett's test of Sphericity χ^2=3212.17 (df=171, p< .001). Then EFA was applied, because KMO should be equal to or higher than 0.50 and the Bartlett's Test of Sphericity should be significant (p< .05) (Netemeyer, Bearden, & Sharma, 2003). As a result of the EFA applied to data from the study conducted on 366 prospective teachers. According to Principal Component Analysis and Rotated Component Matrix, two-factor structure explains 48.8 % of the total variance, and which consists of 19 items, and two subscales (Characteristics of child molesters=6 items, Grooming methods=13 items). Results was given Table 1. Coefficients smaller than .35 were suppressed as factor loadings which are higher than .40 are considered significant. Concluding the item correlation and factor analysis, the correlation of the items was evaluated and accordingly, 21 items were thrown.

Table 1. *EFA Factor Loading and Variance rates of the KACMS*

Item No	Grooming methods	Characteristics of child molester
30	.862	
29	.782	
33	.770	
34	.759	
31	.757	
26	.743	
35	.733	
27	.635	
28	.630	
32	.572	
36	.555	
14	.492	
37	.418	
16		.759
18		.640
20		.639
24		.543
23		.530
21		.463
Total variance 48.80%	*34%*	*14.80%*

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As seen Table 1, the first factor of the scale explains 34% of the total variance, and the factor loadings of the items range between .42 and .86. The second factor of the scale explains 14.80% of the total variance, and the factor loadings of the items range between .46 and .76.

Moreover, internal consistency (Cronbach's alpha) coefficient was calculated to check reliability in this group. Cronbach's α= .72 for the characteristics of child molesters; α=.90 for the grooming methods, and α= .90 for whole scale.

Confirmatory Factor Analysis (CFA): Due to its significance in terms of determining if the model structured in EFA is a good fit or not, CFA was applied to a different data set (215 psychological counselor candidates and 29 master students in Educational Sciences). In the confirmatory factor analysis applied for the two-dimension model, fit indices values were χ^2= 132.26, df= 50 (χ^2/df=2.64), RMSEA= .08, SRMR=.065, NFI= .94, RFI= .92, IFI= .96, CFI= .96, TLI= .95. CFA path diagram standardized analysis coefficients for factor-item relations calculated with CFA are presented in Figure 1.
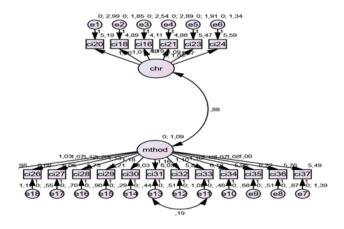

Figure 1. CFA Path Diagram

As seen on Figure 1, a single modification was made between ci31 and ci 33 and the scale was validated. The factor loadings of the items range between .40 and .91. The observed factor-item relationships were found to be significant (p<.01).

Concurrent Validity: Correlation coefficient between the KACMS and the PCS was determined as r=.64 for concurrent validity (Convergent validity). In addition, correlation coefficients of the sub-dimensions are shown in Table 2.

Table 2. Correlation coefficient between the KACMS and the PCS

Dimension	1. CCM	2. GM	3. KACMS	4. PM/PCC	5. PCSN	6. PCS
1. CCM	-	.67**	..84**	.49**	.49**	.55**
2. GM		-	.95**	.57**	.52**	.61**
3. KACMS (Total)			-	.59**	.55**	.64**
4. PM/PCC				-	.56**	.95**
5. PCSN					-	.80**
6. PCS (Total)						-

p<.01 **CCM: Characteristics of Child molesters; **GM:** Grooming methods; **KACMS:** Knowledge and Awareness Scale On the Child Molesters' Characteristics and Grooming Methods; **PM/PCC:** Perceptions of Moral/Personal Characteristics of Criminals; **PCSN**: Perceptions of Criminals' Social Networks; **PCS:** Perceptions toward Criminals Scale

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As seen on Table 2, Total KACMS have positive correlations with PM/PCC and PCSN (r=.49, .49). There are also positive correlations among dimensions of both scales.

Reliability

Internal Consistency: Cronbach alpha internal consistency coefficient was α=.94 for the whole scale, α=.96 for the grooming methods, α=.75 for the characteristics of child molesters.

Item Analysis

Corrected item-total correlation: In addition, corrected item-total correlations of the scale items are shown in Table 3.

Table 3. Corrected item-total correlations coefficients

Item No	Corrected Item-Total Correlation (r)	Item No	Corrected Item-Total Correlation (r)
m1	.44	g5	.85
m2	.52	g6	.84
m3	.32	g7	.81
m4	.49	g8	.72
m5	.58	g9	.81
m6	.65	g10	.78
g1	.70	g11	.80
g2	.80	g12	.74
g3	.76	g13	.65
g4	.76		

As seen on Table 3, The corrected item-total correlations range between .32 and .85 for whole scale.

DISCUSSION

In this study, it was aimed to develop the KACMS in order to scale knowledge and awareness level of teachers, prospective teachers and psychological counselor candidates about child molesters, especially their characteristics and grooming methods. For this purpose, the validity of the KACMS was determined with factor analysis and concurrent validity. Factor analyses were conducted as descriptive factor analysis (EFA) and confirmatory factor analysis (CFA). Comrey (1988) stated that if the number of items did not exceed 40, a sample size of 200 individuals would be sufficient. For EFA, factor loadings are higher than the value .40 which is acceptable in the literature. Costello and Osborne (2005) recommended that taking the .40 value as a criterion for the common variance would be more meaningful and accurate for the social sciences. For CFA, scores of IFI, CFI, and TLI satisfy the criteria for absolute fit. On the other hand, χ^2/df, SRMR, RMSEA, NFI, RFI satisfy the criteria for acceptable fit. Kline (2011) stated that if the score for SRMR is $.00 \leq$ SRMR $\leq .05$, criteria for absolute fit can be said. Or, if the score for SRMR is $.05 \leq$ SRMR $\leq .10$, criteria for acceptable fit can be said. Byrne and Campbell (1999) declared if the score for RMSEA is $.00 \leq$ RMSEA $\leq .05$, criteria for absolute fit can be said. Or, if the score for RMSEA is $.05 \leq$ RMSEA $\leq .08$, criteria for acceptable fit can be said. According to Kline (2011) and Byrne (2016), χ^2/df< 2, NFI>.95, CFI>.95, IFI>.95, RFI>.95, TLI> .95 are the criteria for absolute fit. For concurrent validity, the scale has positive relation with the Perceptions toward Criminals Scale at the level of p<.01 significance. It was therefore concluded that it met criterion. If the findings of reliability study and item analysis of the KACMS were controlled, the correlation coefficients which were obtained by Cronbach's alpha value and corrected item-

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total correlation are above at an acceptable criterion. With Cronbach's alpha internal consistency reliability coefficient higher than .70 and corrected items total correlation values higher than .30 (Cohen & Swerdlik, 2017), it shows that the KACMS is a trustworthy or consistency scale. In other words, even if KACMS is applied to the same group at different times, it will give similar results.

The present study has also limitation. Data were collected from students from educational faculty. In the future studies, this scale should be conducted with professionals working with children.

CONCLUSION

As in many countries, child abuse is one of the most problematic and harrowing issues in Turkey. It looks like this problem will continue for a while, because it is very difficult to detect the child molesters. In Turkey, the KACMS is the first and only measure of sexual grooming behaviors, methods and characteristics of child molesters that is based on the content validated KACMS. Future research can provide further support for the psychometric properties of the KACMS and cover in the numerous gaps in the sexual grooming literature. KCMS can also be used in order to scale professionals' knowledge and awareness level of child molesters, when they are appointed to work with children. Thus, professionals can be empowered to child molesters with pre-service and in-service educations and trainings. This scale, as well as the associated empirical findings, will be useful in numerous practical settings, especially field of school counseling, social work, psychology, pedagogy, forensic psychiatry.

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