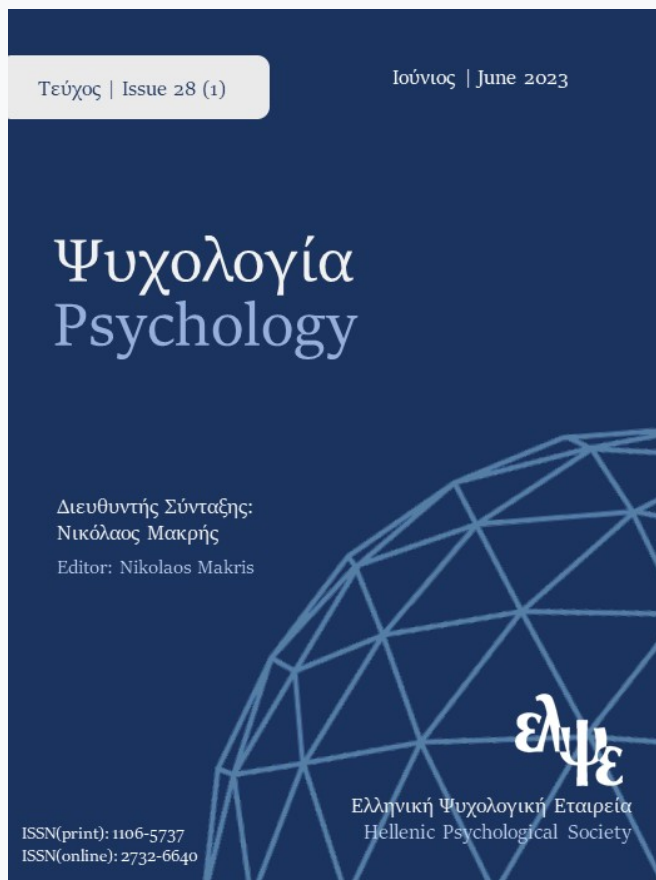


Psychology: the Journal of the Hellenic Psychological Society

Vol 28, No 1 (2023)

Special Section: Approaching intersectionality in gender psychology research



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doi: [10.12681/psy_hps.31455](https://doi.org/10.12681/psy_hps.31455)

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To cite this article:

Daoultzis, K. C., & Kordoutis, P. (2023). Construction and validation of a new scale for measuring dimensions of the heterosexual identity: The Male Identity Scale (MIS). *Psychology: The Journal of the Hellenic Psychological Society*, 28(1), 95–115. https://doi.org/10.12681/psy_hps.31455

Construction and validation of a new scale for measuring dimensions of the heterosexual identity: The Male Identity Scale (MIS)

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KEYWORDS

Heterosexual male identity,
Gender identity measurement,
Psychometric properties,
LGBIS,
Greek straight men

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ABSTRACT

This study provides preliminary psychometric data on a newly designed self-report measure assessing heterosexual male identity dimensions; it is labelled Male Identity Scale (MIS) and is an adaptation from the Lesbian, Gay, and Bisexual Identity Scale (Mohr & Kedra, 2011) that takes into account the theoretical models by Marcia (1987) and Worthington et al. (2002) concerning heterosexual identity development. Two studies were conducted to evaluate the validity and reliability of the MIS. In Study 1 ($n = 563$ straight men) an Exploratory Factor Analysis and a Confirmatory Factor Analysis supported a 5-factor solution reflecting heterosexual male identity dimensions such as Acceptance Concerns, Identity Uncertainty, Identity Superiority, Identity Centrality and Heteronormativity. Predicted associations with measures of masculinity-related constructs and psychosocial functioning provided preliminary validity evidence for MIS scores in an undergraduate university male student population. Study 2 ($n = 116$ straight men) provided evidence of the test-retest and internal consistency reliability of MIS scores. These studies suggest that the MIS may offer researchers an efficient means of assessing the multiple dimensions of heterosexual male identity.

Introduction

While many studies have explored the sociopsychological processes involved in the sexual identity of many non-heterosexual groups and in the attitudes towards them, only a few have dealt with the processes involved in the sexual identity development of heterosexuals. Rarely, has the sexual identity of heterosexuals been the focus of research; they are usually treated as “a monolithic, stable group with predictable attitudes about non heterosexuals and a consistent clear sense of their own heterosexual identity” (Eliason, 1995, p. 821). By predominantly or exclusively focusing on the processes of minority identity development, the notion that heterosexuality is the “standard” sexual orientation is invigorated and preserved. From this subtle and yet inadvertently biased perspective, the LGBTQI+ sexual identity is viewed as a divergent sexual orientation that needs to be comprehensively assessed. The latter leads to a “heterosexual orientation bias”, both in theory and research (Brammer, 2012). Specifically, even though many measurements for assessing LGBTQI+ identities have been developed (e.g., Lesbian, Gay, and Bisexual Identity Scale by Mohr & Kendra, 2011; Genderqueer Identity Scale by McGuire et al., 2019) only two measurements for probing heterosexual identity have been identified. These include the scale by Martinez and Smith (2019) assessing four different types of heterosexual identities but only in relation to sexual orientation minorities, and the scale by Simoni and Walters (2001) who were in turn based on the Helms’s and Carter’s model (1990) of White Racial Identity Attitudes (WRIAS). These scales, even though theory-based are not largely used in research. Moreover, they seem to one-sidedly pay attention to sexual minorities and compare heterosexuals to them or overemphasize the privileges offered by heterosexism. By “heterosexual privileges”, Herek (2004) refers to the societal advantages provided to heterosexuals based on the perception that their sexual orientation is the only natural sexual identity or expression.

The “Scale to Measure Heterosexual Identity” (Martinez & Smith, 2019) is rooted in Mohr’s (2002) “working models of sexual orientation”. These are essentially cognitive models which are used in conceptualizing one’s own sexual identity as well as that of the other. In Mohr’s theory, there are four working models or types of heterosexuality: (a) democratic (i.e., people of all sexual orientations are the same), (b) compulsory (a type of

heterosexuality similar to heterosexism), (c) politicized (an exact opposite to the compulsory model of heterosexuality, as sexual minority individuals are regarded as “*oppressed and courageous survivors of a hostile sociopolitical culture*”; Mohr, 2002, pp. 544) and (d) integrative (i.e., all individuals irrespective of their sexual orientation are thought to be oppressed by the same system or society). The scale developed by Martinez and Smith (2019) comprises five items for each of the working models that have been tested for reliability and validity. However, all items are concentrating almost exclusively on the comparisons between heterosexuals and non-heterosexuals, while other aspects such as the exploration of the sexuality of heterosexuals or the importance of their sexual identity compared to other identities (personal or social) are not accounted for.

On the other hand, Simoni and Walters (2001) created their Heterosexual Identity Attitude Scale (HIAS) based on the White Racial Identity Attitude Scale (WRIAS; Helm & Carter, 1990). The HIAS, containing 50 items, stems from the “*heterosexual privilege*” approach, and measures the extent to which straight individuals are aware of their unwarranted institutionalized rights and of their advantages over sexual minorities. This approach entails five stages from “contact” (i.e., a straight person is completely unaware of their societal privileges, may believe that everyone is equal and that there is no issue of securing the rights of sexual minorities) through “reintegration” (i.e., idealize everything about heterosexuality and denigrate non-heterosexual characteristics and people) to autonomy (i.e., an integrated and anti-heterosexist identity).

In assessing heterosexual identity, the above measures include items reflecting comparisons of straight to non-straight people and few if any items depicting intra-individual identity development processes per se, ignoring heterosexual identity development theories and relevant research. We need measures that do assess the intra-individual as well as the social nature of male heterosexual identity. To illustrate, we briefly refer to relevant theory below.

Sexual identity has evolved as a fluid self-perception shaped by societal, historical, intra-, and interpersonal factors (e.g., Stein, 1997), like socially fabricated and imposed gender roles and cultural norms. These factors assist a person to establish a personal sexual value system (Masters et al., 1994) regardless of their sexual orientation, while appreciating factors like attraction, affection, arousal, and behavior (Schreier & Lassiter, 2010; Worthington et al., 2002). A crucial point concerning sexual identity is its division into personal and social; personal sexual identity indicates the internal experience and understanding of one’s sexual orientation, while social sexual identity reflects the way in which individuals externally express their sexual orientation (Hoffman, 2004). Mohr (2002) suggests that personal and social identity interact to influence sexual identity development. The distinction between personal and social identity can be further explained considering the theoretical models of Fassinger and Miller (1997) for sexual minority identity formation, the one of Marcia (1987) for the concepts of exploration and commitment, and of the model by Worthington (2002) which emphasizes both types of identity as two parallel, reciprocal processes. On the one hand, personal identity development involves recognition and acceptance of one’s sexual needs, values, sexual orientation and on the other hand social identity development comprises the recognition of oneself as a member of a group of individuals with similar sexual identities and attitudes toward sexual minorities. The two process components occur within five discernible identity “*development statuses*”: (a) Unexplored commitment, (b) Active exploration, (c) Diffusion, (d) Deepening and commitment, and (e) Synthesis (see also Marcia’s theory). Although the model is meant to describe developmental phenomena, there are opportunities for circularity and revisiting of statuses throughout the life span development of any given individual. Thus, the processes involved should be considered as flexible, fluid descriptions of statuses that people may pass through as they develop their sexual identity, and many different trajectories and outcomes of identity development may occur.

The concepts of exploration and commitment are essential in Marcia’s model (1987) for the Sexual Identity Development (SID). SID is governed by many factors such as biology, social influences (gender role conformity, sexual knowledge, attitudes, sexual values, and sexual behaviors), gender norms and socialization, culture (a set of beliefs, traditions, and values), religion and systemic homonegativity (sexual prejudice and sense of being privileged). In addition, the presence or absence of exploration and commitment is essential in SID, resulting in four potential statuses: (a) Diffusion (i.e., the person has no active sense of identity, does not explore nor commit to any identity), (b) Foreclosure (i.e., the person has accepted an identity, imposed by others or by society, without any exploration but uncritically commits to this identity), (c) Moratorium (i.e., the person actively explores an identity, but does not yet commit) and (d) Achievement (i.e., after the process of moratorium, the person had made a conscious commitment to a particular identity).

To capture specifically heterosexual identity development (HID), the processes and individual differences involved, several theoretical frameworks have been developed. Mohr (2002) defines heterosexual identity as a “*product of the interplay between individuals’ sexual orientation schemas and their motivation to fulfill basic needs for social acceptance and psychological consistency*” (p. 492). In the same line as Marcia’s theory and based on the racial identity development model (e.g., Hardiman & Jackson, 1992), Sullivan (1998) described five stages of increasing awareness and complexity regarding HID: “*Naiveté*”, “*Acceptance*”, “*Resistance*”, “*Redefinition*”, and “*Internalization*”. Additionally, scholars (Mohr, 2002; Worthington & Mohr, 2002; Worthington et al., 2002) have conceptualized HID from available sexuality theories (Kinsey et al., 1953; Klein, 1990) and traditional models of sexual identity development (e.g., Cass, 1979; Eliason, 1995; Marcia, 1987). Worthington et al. (2002) and Mohr (2002) present two independent models of HID that integrate theoretical models of majority group identity development (Helms, 2014). Worthington et al.’s (2002) multidimensional model also includes developmental statuses and the biopsychosocial influences of individual and social identity, which are often overlooked in traditional models (Hoffman, 2004). Worthington et al. (2004) additionally proposed that HID might be characterized by a convergence of individual and social identity development processes within a biopsychosocial context (Hoffman, 2004).

Most of the theoretical frameworks delineated above lack sufficient empirical support. Albeit some, like Marcia’s, have been empirically assessed in many empirical studies (e.g., Shepler, 2012; Meeus et al., 2012). For instance, a qualitative study by Eliason (1995) illustrates the point that we need to compensate for the lack of intrapsychic measurement of heterosexual identity and the overemphasis on comparing with minorities. Specifically, 26 heterosexual male students reported how their sexual identities were formed and how they influence their daily lives. Six common themes emerged: (a) never thought of their sexual identity, (b) heterosexuality is a society product, (c) gender determines sexual identity, (d) issues of acquired versus inborn nature of sexuality (e) no alternative to heterosexuality and (f) the influence of religion. Other theoretical models, like the ones by Mohr (2002) and Worthington et al. (2002) have yet to be empirically tested.

The current study

The motivation for this research springs from a lack of empirical research supporting the theoretical models for heterosexual identity. Even though two scales have been developed in the past, and the content domain specification and item pool generation have been explained in detail, the multidimensional nature of the heterosexual identity was not considered. Literature review (theoretical models and research findings) suggests that several dimensions may be involved in the heterosexual identity construct, such as “identity acceptance concerns” (based on Worthington et al model regarding “unexplored commitment”), “identity uncertainty” (capturing “Diffusion” and “Foreclosure” in Marcia’s model), “identity superiority” (displaying “heterosexual privileges” according to Simoni and Walter’s approach), “identity affirmation” (reflecting the concept of “Synthesis” by Worthington et al., 2002), “identity centrality” (based on the research findings by Eliason) and “attitudes towards non-heterosexuals” (based on Mohr’s theoretical approach). The current research aims to develop an instrument that assesses the multidimensional nature of male identity and tests its psychometric properties. The instrument, referred to from now on as Male Identity Scale (MIS), also employs and adapts items from the Lesbian, Gay, and Bi Identity Scale (see Methods).

In Study 1, we assessed the construct validity of the MIS. Our theoretical framework suggested that male identity comprised several dimensions, hence we first conducted an Exploratory Factor Analysis to explore the multifaced nature of the construct. Subsequently, the multidimensionality of the MIS was ascertained using the Confirmatory Factor Analysis. The convergent and discriminant validity of the proposed scale was examined by comparing it to already established scales measuring conceptually relevant constructs, such as the Masculinity Contingency Scale and the Bem Sex Role Inventory. Further, the three well-known scales, the Revised Sociosexual Orientation Inventory, the Rosenberg Self-esteem Scale, and Experiences in Close Relationships were used for testing criterion validity.

In Study 2, we assessed the reliability of the MIS. Internal consistency was tested using Cronbach’s alpha and the Spearman-Brown index. For test-retest reliability, we performed cross-scale correlations for the first and second sampling period separately. The study contributes to the exploration of heterosexual identity by developing a valid and reliable measure of assessment.

Study 1

Materials & Methods

Participants

Initially, 722 participants were recruited. Participants were excluded according to two criteria, self-reporting (a) a sexual orientation other than exclusively heterosexual on the Kinsey Scale (see “Measures” below), and (b) gender other than male. Following, 132 participants were excluded as they stated sexual orientation other than exclusively heterosexual and 27 as they self-identified as non-male. The final sample consisted of 563 straight men.

Measures

Translation. All items have been translated from English to Greek for the purpose of this paper, applying a multi-step approach recommended in the literature (Brislin, 1970; Katan, 2012; Swami & Barron, 2019). First, a professional translator conducted a forward translation. Thereafter, two independent researchers, bilingual in English and in Greek and knowledgeable of the interpersonal relationships’ domain, met with the first author to assess the conceptual equivalence of translated and original items. Minor revisions to the translated items were decided upon in consensus. Last, a professional language editor checked the final version.

Development of the MIS

For constructing the MIS, we employed three phases as proposed by Hinkin (1995) for item development (i.e., identification of domain and item generation, content validity), scale development (i.e., pre-testing of questions, sampling and survey administration, item reduction), and scale evaluation (i.e., extraction of factors, tests of dimensionality, tests of reliability, tests of validity). To identify relevant items, we were based on the Lesbian, Gay, and Bisexual Identity Scale. LGBIS is a 27-item tool with good psychometric properties (Mohr & Kendra, 2011; Kachel et al., 2016) that assesses 8 dimensions of homosexuality and bisexual identities and has been extensively used in the literature (Kachel et al., 2016). The 8 subscales of the LGBIS are: (1) Acceptance concerns (3 items, e.g., “Often I wonder if others criticize me for my sexual preferences”), (2) Concealment motivation (3 items, e.g., “I prefer to keep my same-sex relationship better on a personal level”), (3) Identity Uncertainty (3 items, e.g., “I’m absolutely sure of my sexual orientation”), (4) Internalized homophobia / homophobia (3 items, e.g., “If it were possible, I would choose to I was heterosexual”), (5) Difficult process (3 items, e.g., “I felt comfortable with my sexual identity from the beginning”), (6) Identity superiority (3 objects, e.g., “I believe that homosexuals are superior to heterosexuals”), (7) Identity confirmation (3 items, e.g., “I am happy to be gay”) and (8) Identity centrality (5 objects, e.g. “The fact that I am gay is an important aspect of it of my life”). Responses were collected using a 6-point Likert scale (1 = *strongly disagree*, 6 = *strongly agree*) to indicate agreement or disagreement with each item. For the purposes of the MIS study, the subscales of Concealment Motivation, Internalized Homonegativity, Difficult Process were removed as they could not be adjusted to straight respondents, while Acceptance Concerns, Identity Uncertainty, Identity Superiority, Identity Affirmation, and Identity Centrality were included as they tap into aspects of identity that are similar among homosexuals and heterosexuals. Slight modifications (use of term “heterosexual” instead of “LGB” and vice versa) were implemented.

We also included some more items based on heterosexual identity theorizing and empirical findings: (a) identity is not an issue for straight people and heterosexuality is a society product (Item 18: “Never thought of my sexual orientation” and Item 20: “For the most part of my life, I have never thought about my sexual orientation”), (b) there is no socially accepted alternative to heterosexuality (Item 12: “I’m proud that because of my sexual preferences I do not belong to a sexual minority”), (c) heteronormative social identity processes (Item 21: “I only get involved in activities that are considered to be “straight”) and (d) comparisons with sexual minorities and homonegativity items (Item 19: “I feel comfortable when I am with straight people the same as when I am with LGB people” and Item 22: “I feel hostile when I’m with LGB people”). For a detailed presentation of the scale items see Table 1.

To test for the convergent and discriminant validity of the MIS instrument, we employed convergent validity measures assessing male identity dimensions such as the Masculinity Contingency Scale and the masculinity traits included in the Bem Sex Role Inventory and for discriminant validity, the femininity traits included in the Bem Sex Role Inventory. To test for the criterion validity, we used psychosocial, psychosexual, and relational functioning measures, such as the Rosenberg Self-esteem scale, the Sociosexual Orientation Inventory, and the Experiences in Close Relationships. The Kinsey scale was employed to distinguish between participants who were self-identified as exclusively heterosexual and those who reported other sexual orientation.

Masculinity Contingency Scale (MCS). The MCS was developed by Burkley et al. (2015) to assess the extent of a man's self-worthiness derived from their sense of masculinity. It contains 10 items grouped into two factors: (a) MCS-Threat, i.e., self-worth is threatened by lack of masculinity ("My self-worth suffers if I think my manhood is lacking") and (b) MCS-Boost, i.e., self-worth is boosted by masculinity ("I feel good when I am able to show off my masculine side"). The developers of the scale presented high reliability and validity coefficients for the tool; in the present study these psychometric properties were confirmed as all items loaded in the expected factors (total variance explained = 76.37%) and demonstrated high internal consistency (for MCS-Threat $\alpha = .91$ and for MCS-Boost $\alpha = .93$).

Bem Sex Role Inventory (BSRI-12). The 12-Item Bem Sex Role Inventory (Carver et al., 2012) was derived by the original 60-item BSRI (Bem, 1974). BSRI-12, as the original tool, measures participants' instrumental (masculine; 6 items) and expressive (feminine; 6 items) traits, employing a 7-point Likert scale (1 = "Not applicable", 7 = "Totally applicable"). Good psychometric properties were found in the Spanish version (Cronbach alpha $>.70$, three-factor solution) but not in the English version (Cronbach alpha $<.70$, two-factor solution) (Mateo & Fernandez, 1991). Further exploration in the present study supported the two-factor solution (total variance explained = 56.62%) and all masculinity and femininity items loaded in the expected factors (for masculinity items $\alpha = .80$ and for femininity items $\alpha = .87$).

The Revised Sociosexual Orientation Inventory (SOI-R). SOI-R contains 9 items (Penke & Asendorpf, 2008) to assess the three facets of a person's tendency to have casual and uncommitted sexual relationships or be more "permissive": (a) the "Behavior" facet (number of casual sex partners; e.g., "With how many different partners have you had sex within the past 12 months?") (b) the "Attitude" facet (attitudes towards uncommitted sex; e.g., "Sex without love is OK") and (c) the "Desire" facet (sexual desire for people with whom no romantic relationship exists; e.g., "In everyday life, how often do you have spontaneous fantasies about having sex with someone you have just met?"). Responses are provided on a 9-point Likert scale and higher scores indicate more permissiveness. The good psychometric properties of the tool have been found in testing its original version (Penke & Asendorpf, 2008), the Hungarian version (Meskó et al., 2014), the Portuguese version (Neto, 2016), the Spanish version (Barrada et al., 2018) and the Polish version (Nowosielski et al., 2021). In the present study, the three-factor structure was validated (total variance explained = 73.44%) and good internal consistency was found for all subscales (for Behavior $\alpha = .80$, for Attitudes $\alpha = .81$ and for Desire $\alpha = .83$, total score $\alpha = .82$).

Rosenberg Self-esteem Scale (Rosenberg, 1965). Rosenberg's self-esteem scale is one of the most used scales in Psychology for measuring global self-worth resulting from both positive (5 items, e.g., "On the whole, I am satisfied with myself") and negative feelings (5 items, e.g., "I feel I do not have much to be proud of") about the self. Contains 10 items in total and responses are measured using a 4-point Likert scale (1 = "Strongly disagree", 4 = "Strongly agree"). The psychometric properties of the tool have been supported in numerous studies (e.g., German version: Ferring & Filipp, 1996; Chinese version: Martin et al., 2006; Dutch version: Franck et al., 2008; Pakistani version: Rizwan et al., 2012). In the present study, the unidimensional structure of the tool was further supported (total variance explained = 60.05%) with global $\alpha = .86$.

Experiences in Close Relationships - Revised (ECR-RS). ECR-RS (Fraley et al., 2000) is derived from the original 36-item Experiences in Close Relationships by Brennan et al. (1998) that measures attachment anxiety and attachment avoidance in multiple contexts. In the present study the global version of the ECR-RS was used. It contains 9 items, six of which measure avoidance (e.g., "It helps to turn to people in times of need") and three measure anxiety (e.g., "I'm afraid that other people may abandon me"). Higher scores indicate more avoidance and / or anxiety. Fraley et al. (2011) have validated the instrument's two-factor structure and its good internal consistency. In the present study, we used the validated Greek version of the tool (Tsagarakis et al., 2007). Its validity was further confirmed (total variance explained = 66.06%) and so was its internal consistency (avoidance $\alpha = .86$ and anxiety $\alpha = .85$).

Table 1

Original items from the LGBIS, items for MIS and Greek translation

	Original items (LGBIS)	Male Identity Scale (MIS)	Greek translation of MIS
Acceptance	I often wonder whether others judge me for my sexual orientation (Item 5)	I often wonder whether others doubt me as heterosexual (Item 3)	<i>Συχνά αναρωτιέμαι εάν οι άλλοι αμφισβητούν τον σεξουαλικό προσανατολισμό μου.</i>
	I can't feel comfortable knowing that others judge me negatively for my sexual orientation (Item 9)	Same as in LGBIS (Item 6)	<i>Δεν μπορώ να νιώσω άνετα ξέροντας ότι οι άλλοι με κρίνουν αρνητικά για τον σεξουαλικό προσανατολισμό μου.</i>
	I think a lot about how my sexual orientation affects the way people see me. (Item 16)	Same as in LGBIS (Item 9)	<i>Σκέφτομαι πολύ για το κατά πόσο η σεξουαλική μου ταυτότητα επηρεάζει το πώς με βλέπουν οι άλλοι.</i>
Identity	I'm not totally sure what my sexual orientation is (Item 3)	Same as in LGBIS (Item 1)	<i>Δεν είμαι απόλυτα βέβαιος για τον σεξουαλικό προσανατολισμό μου.</i>
	I keep changing my mind about my sexual orientation (Item 8)	Same as in LGBIS (Item 5)	<i>Αλλάζω συνεχώς άποψη για τον σεξουαλικό προσανατολισμό μου.</i>
Identity	I get very confused when I try to figure out my sexual orientation (Item 22)	Same as in LGBIS (Item 13)	<i>Νιώθω πολύ μπερδεμένος όταν προσπαθώ να βγάλω άκρη σχετικά με τον σεξουαλικό προσανατολισμό μου.</i>
	I look down on heterosexuals (Item 7)	I look down on LGBTQI+ persons (Item 4)	<i>Υποτιμώ τα ΛΟΑΤΚΙ+ άτομα.</i>
Ident	I feel that LGB people are superior to heterosexuals (Item 10)	I feel that heterosexuals are superior to LGBTQI+. (Item 7)	<i>Πιστεύω ότι οι στρέιτ είναι ανώτεροι από τα ΛΟΑΤΚΙ+ άτομα.</i>
	Straight people have boring lives compared to LGB people (Item 18)	LGBTQI+ people live marginally compared to straight people (Item 10)	<i>Τα ΛΟΑΤΚΙ+ άτομα ζουν στο περιθώριο σε σχέση με τους στρέιτ.</i>
Ident	I'm glad to be an LGB person (Item 6)	I am glad to be heterosexual (Item 2)	<i>Είμαι ευχαριστημένος που είμαι στρέιτ.</i>
	I am proud to be LGB (26)	I'm proud to be heterosexual (Item 17)	<i>Είμαι περήφανος που είμαι στρέιτ.</i>
Identity Centrality	My sexual orientation is an insignificant part of who I am (Item 11)	Same as in LGBIS (Item 8)	<i>Η σεξουαλική μου ταυτότητα δεν αποτελεί σημαντικό κομμάτι του ποιος είμαι.</i>
	My sexual orientation is a central part of my identity (Item 15)	Same as in LGBIS (Item 15)	<i>Ο σεξουαλικός προσανατολισμός μου αποτελεί κεντρικό κομμάτι της ταυτότητάς μου.</i>
Identity Centrality	To understand who I am as a person, you have to know that I'm LGB (Item 21)	To understand who I am as a person, you have to know that I'm heterosexual (Item 11)	<i>Για να καταλάβει κάποιος ποιος είμαι σαν άτομο, πρέπει να έχει στα υπόψιν του ότι είμαι στρέιτ.</i>
	Being an LGB person is a very important aspect of my life (Item 24)	Being a heterosexual is a very important aspect of my life. (Item 14)	<i>Το γεγονός ότι είμαι στρέιτ αποτελεί σημαντική πτυχή της ζωής μου.</i>
Identity Centrality	I believe being LGB is an important part of me (Item 25)	Being a heterosexual is a very important aspect of myself (Item 16)	<i>Πιστεύω ότι το ότι είμαι στρέιτ είναι σημαντικό κομμάτι του εαυτού μου.</i>
	-	Never thought of my sexual orientation (Item 18)	<i>Δεν σκέφτομαι καθόλου τον σεξουαλικό προσανατολισμό μου.</i>
Identity Centrality	-	For the most part of my life, I have never thought about my sexual orientations (Item 20)	<i>Για το μεγαλύτερο μέρος της ζωής μου, δεν σκέφτηκα ζητήματα σχετικά με τον σεξουαλικό προσανατολισμό μου.</i>
	-	I only get involved in activities that are considered to be "straight" (Item 21)	<i>Περιορίζομαι μόνο σε δραστηριότητες που θεωρούνται «στρέιτ».</i>
New items	-	I feel comfortable when I am with straight people the same as when I am with LGBTQI+ people (Item 19)	<i>Αισθάνομαι άνετα όταν είμαι με ΛΟΑΤΚΙ+ άτομα, όπως κι όταν είμαι με στρέιτ.</i>
	-	I feel hostile when I'm with LGBTQI+ people (Item 22)	<i>Αισθάνομαι εχθρικά όταν είμαι με ΛΟΑΤΚΙ+ άτομα.</i>
New items	-	I'm proud that because of my sexual preferences I do not belong to a sexual minority (Item 12)	<i>Είμαι περήφανος που λόγω των σεξουαλικών προτιμήσεων μου δεν ανήκω σε κάποια σεξουαλική μειονότητα.</i>

*Note. LGBIS items 1, 2, 4, 8, 12, 13, 14, 17, 19, 20 and 27 were removed.

Kinsey Scale. The sexual orientation of the respondents was assessed through the Kinsey Scale (Kinsey et al., 1948). Responses are collected on a seven-point scale, ranging from 0 (“*Exclusively heterosexual*”) to 6 (“*Exclusively homosexual*”). Responses between 1 (“*Predominantly heterosexual, only incidentally homosexual*”) to 5 (“*Mostly homosexual and only occasionally heterosexual*”) identify individuals with different levels of same-sex or opposite-sex attraction (Jabbour et al., 2020; Sell, 1997).

Procedure

Participants were recruited from February to April 2021. The virtual snowball sampling technique was employed (Baltar & Brunet, 2012) via the Google Forms platform. Participants were briefed about the purpose of the study and were asked to fill out the informed consent form. They were assured about the anonymity of their responses and the right to withdraw at any time during the procedure in accordance with the Declaration of Helsinki (World Medical Association, 2013). Subsequently, they provided information on their demographics and responded to the study measures. Average participation time was 20 minutes.

Results

Most participants were holding a bachelor’s degree ($n = 385, 68.4\%$), they were undergraduate university students ($N = 338, 60\%$), living in a metropolitan area ($n = 365, 64.8\%$), they were singles ($N = 378, 49.4\%$) and most of them had contacts with LGBTQI+ people ($n = 305, 54.2\%$). Their mean age was 26.99 ($SD = 10.14$) and ranged from 18 to 65 years old. See Table 2 for the detailed demographics.

Exploratory Factor Analysis (EFA)

Table 3 shows the rotated three-factor solution for the MIS (Principal Component Analysis, Varimax with Kaiser Normalization). An orthogonal technique was used, as almost all correlations among factors were found $< .32$ (Tabachnick et al., 2007, p. 646) and thus it was hypothesized that the solution is orthogonal. A five-factor solution was chosen because this was the predicted number of factors on theoretical grounds. The five factors accounted for 62.76% of total variance. Table 2 shows that for all five factors, all 22 items but two outliers (Item 21: «*I only get involved in activities that are considered to be “straight”*» and item 2: «*I am glad to be heterosexual*») loaded on the expected factor. Also, three more items (items 3, 11 and 12 were excluded due to their low loadings) ($< .40$) (Tabachnick et al., 2007). Therefore, the final version of the questionnaire contained 17 items of the original 22.

In sensitivity analysis, we considered the number of the measured variables, the structure coefficients and the numbers of factors detected. The MIS’ factors as identified by EFA could be replicated, as: (a) there were five with a structure coefficient of at least .60, (Dimitrov, 2012) and (b) the sample size was 563, a little over the upper bound of the required size of 400 (Guadagnoli & Velicer, 1988 as cited in Kyriazos, 2018).

Confirmatory Factor Analysis (CFA)

A confirmatory factor analysis (CFA) was employed to check the model fit of the structure found in the EFA using the AMOS for IBM SPSS, version 22. Table 4 and Figure 1 represent the resulting CFA for the proposed model.

Following the EFA results, items 2, 3, 11, 12 and 20 were excluded from further analyses, due to their low loadings and the instrument was minimized to 17 items. The MIS with 17 items reached CFI of .95 and RMSEA of .05 indicating a good model fit (Hu & Bentler, 1998). Moreover, the fit was found as follows: $\chi^2(df) = 278.58 (109), p < .001$ ($\chi^2/df = 2.56$), TLI = .93, NFI = .94 and GFI = .95. In evaluating the MIS with 17 items, all indices support the good fit of the proposed model (Awang, 2015). A post-hoc power analysis, using the semPower package (Moshagen & Erdfelder, 2016), showed that the model had acceptable power (90%). Hence, the possibility for Type II error was decreased (Cohen et al., 2003), in line with Kline (Muthén & Muthén, 2002) who recommend a minimum sample size of 150 for any CFA analysis.

Table 2

Demographic characteristics presented as mean ± stand. deviation or numbers (%)

	Exclusively heterosexual men, n = 563
Age, years	26.99 ± 10.14
<i>Education</i>	
Primary education	2 (0.4)
Secondary education	89 (15.8)
Bachelor's degree	385 (68.4)
Master's degree	76 (13.5)
PhD	11 (2.0)
<i>Profession</i>	
Public sector	50 (8.9)
Private sector	101 (17.9)
Freelancer	52 (9.2)
Retired	3 (0.5)
Student	338 (60.0)
Unemployed	19 (3.4)
<i>Marital status</i>	
Single	278 (49.4)
Partnered	208 (36.9)
Married	63 (11.2)
Engaged	3 (0.5)
Divorced	5 (0.9)
Separated	4 (0.7)
In an open relationship	2 (0.4)
<i>Residency</i>	
Metropolitan areas	365 (64.8)
Rural areas	198 (35.2)
<i>Contacts with LGBTQI+ people</i>	
No	258 (45.8)
Yes	305 (54.2)

Table 3
Factor Analysis MIS

	Factors				
	1	2	3	4	5
<i>Identity Centrality</i> ($\alpha = .85$) (Variance explained: 25.66%)					
Item 16	.88				
Item 14	.85				
Item 15	.84				
Item 17	.70				
Item 8*	.64				
<i>Identity Uncertainty</i> ($\alpha = .71$) (Variance explained: 12.23%)					
Item 5		.82			
Item 1		.74			
Item 13		.70			
<i>Identity Superiority</i> ($\alpha = .83$) (Variance explained: 10.18%)					
Item 4			.86		
Item 22			.82		
Item 7			.79		
Item 19*			.69		
<i>Heteronormativity of identity</i> ($\alpha = .67$)** (Variance explained: 7.80%)					
Item 20				.80	
Item 18				.78	
<i>Acceptance Concerns</i> ($\alpha = .70$) (Variance explained: 6.90%)					
Item 6					.72
Item 9					.70
Item 10					.62

*Note. Extraction method: Principal Component Analysis; Rotation method: Varimax with Kaiser Normalization; Rotation converged in 5 iterations. *Item is reversed coded. ** Spearman- Brown reliability coefficient

Table 4
Model fit statistics of the MIS

Model	χ^2 / df	RMSEA	TLI	CFI	NFI	GFI
The proposed model	2.56	.05	.93	.95	.94	.95

*Note. RMSEA = Root Mean Square of Approximation, TLI = Tucker-Lewis Index, CFI = Comparative Fit Index, NFI = Normed Fit Index, GFI = Goodness of Fit Index. Levels for an acceptable model fit: RMSEA < .06, CFI > .95, TLI > .90, NFI > .95, GFI > .90 and $\chi_2 / df < 3$

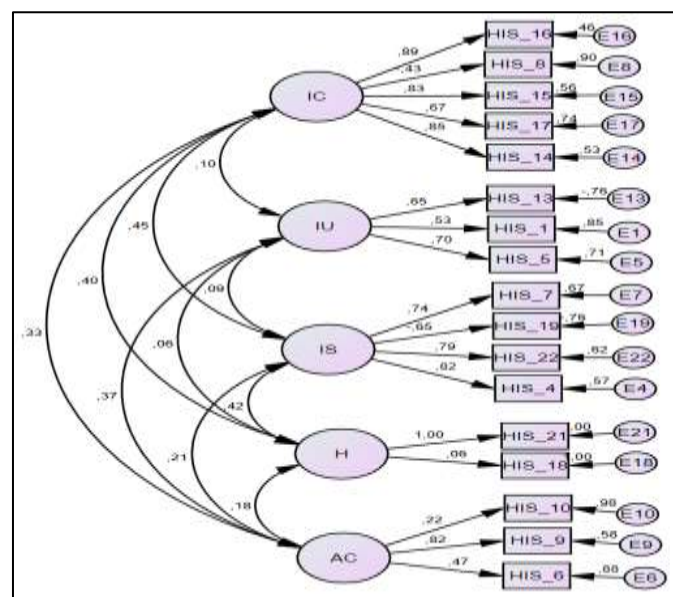


Figure 1. Confirmatory Factor Analysis of MIS

*Note. Loadings are standardized. IC = Identity Centrality, IU = Identity Uncertainty, IS = Identity Superiority, H = Heteronormativity, AC = Acceptance Concerns.

Convergent – discriminant validity

To test for convergent validity, the MCS and the masculinity items of the BSRI-12 were inserted in a correlation model along with the MIS domains. For the discriminant validity the femininity items of the BSRI-12 were used. Results are presented in Table 5.

Table 5

MIS dimensions correlations with MCS (convergent validity) and BSRI (convergent and discriminant validity)

MIS	MCS	BSRI masculinity	BSRI femininity
Identity Centrality	.52***	.22***	.04
Identity Uncertainty	-.03	-.11*	.02
Identity Superiority	.47***	.11*	-.14**
Heteronormativity	.28***	.16***	.05
Acceptance Concerns	.08	-.08	-.02

*Note. MCS = Masculine Contingency Scale, BSRI = Bem Sex Role Inventory, *** $p < .001$, ** $p < .01$, * $p < .05$.

Correlation analyses showed that all but two dimensions of the MIS instrument were positively correlated with the MCS ($.28 \leq r \leq .52, p < .001$) and all but one correlated with the masculine items of BSRI-12. As expected, identity uncertainty is negatively correlated with masculinity items ($r = -.11, p = .032$) and identity superiority is negatively correlated with femininity items of BSRI-12 ($r = -.14, p = .004$). Thus, both convergent and discriminant validity were confirmed.

Criterion validity (Concurrent)

In order to test for concurrent validity, four standard multiple regression models were performed for predicting Self-esteem, Sociosexual Orientation (high – low permissiveness), Attachment avoidance and anxiety. Both the predictor and criterion data were collected at the same time (see Table 6).

Table 6

Standard multiple regression models for predicting Self-esteem, Sociosexual Orientation (SOI), Attachment avoidance and anxiety

Predictors	Self-esteem			Sociosexual orientation			Attachment avoidance			Attachment anxiety		
	B	SE B	β	B	SE B	β	B	SE B	β	B	SE B	β
IC	0.54	0.18	.14**	0.15	0.43	.02	-0.13	0.04	-.14**	0.10	0.05	.09*
IU	-0.43	0.49	-.04	0.02	1.14	<.01	0.21	0.11	.08*	0.19	0.14	.06
IS	-0.12	0.27	-.02	-1.67	0.63	-.12**	0.20	0.06	.15**	-0.05	0.08	-.03
H	0.36	0.19	.08*	1.21	0.43	.12**	0.07	0.04	.07	-0.01	0.05	-.01
AC	-0.81	0.26	-.14**	0.78	0.61	.06	-0.13	0.06	-.09*	0.16	0.08	.09*
R^2	.04			.03			.04			.02		
F	5.08***			2.84*			4.76***			2.72*		

*Note. IC = Identity Centrality, IU = Identity uncertainty, IS = Identity superiority, H = Heteronormativity, AC = Acceptance concerns, SEB = Standard Error of B, *** $p < .001$, ** $p < .01$, * $p < .05$. VIF for all models <1.36.

All standard multiple regression models were statistically significant (Self-esteem: $F_{5,557} = 5.08, p < .001, R^2 = .04$, SOI: $F_{5,557} = 2.84, p = .015, R^2 = .03$, Attachment avoidance: $F_{5,557} = 4.76, p < .001, R^2 = .04$, Attachment anxiety: $F_{5,557} = 2.72, p = .019, R^2 = .02$). Identity Centrality ($\beta = .14, p = .003$) and Heteronormativity ($\beta = .08, p = .049$) positively predicted Self-esteem while Identity Acceptance negatively predicted Self-esteem ($\beta = -.14,$

$p = .002$). With respect to SOI, Identity Superiority negatively predicted Sociosexual Orientation ($\beta = -.12, p = .008$), while Heteronormativity positively predicted SOI ($\beta = .12, p = .005$). Almost all but one MIS dimensions predicted Attachment Avoidance. It was negatively predicted by Identity Centrality ($\beta = -.14, p = .002$) and Acceptance Concerns ($\beta = -.09, p = .035$) and positively predicted by Identity Uncertainty ($\beta = .08, p = .047$) and Identity Superiority ($\beta = .15, p = .002$). Identity Centrality and Acceptance Concerns seem to be important factors as they both predict Attachment Anxiety positively, $\beta = .09, p = .031$ and $\beta = .09, p = .038$ respectively.

Study 2

Materials & Methods

Participants

Initially, 477 men were recruited from January to March 2021. Participants were excluded according to three criteria: (a) self-reporting sexual orientation other than exclusively heterosexual, (b) stating gender other than male and (c) having participated twice in the study with an interval shorter than three weeks. Following, 167 participants were excluded as they reported sexual orientation other than exclusively heterosexual, 15 as they self-identified as “other” in terms of gender, 155 because they completed the survey only the first time and 24 because they completed the survey for the second time in an interval less than three weeks. Hence, the final sample consisted of 116 straight men. They provided written informed consent and completed the questionnaire two times with a three-week interval.

Measures

Measures consisted of the Kinsey scale and the MIS instrument (see Methods section of Study 1 and Introduction).

Results

As in Study 1, most participants were holding a bachelor’s degree ($n = 80, 69.0\%$), they were undergraduate university students ($N = 67, 57.8\%$), living in metropolitan areas ($n = 99, 85.4\%$), they were single ($n = 64, 55.2\%$) and most of them had contacts with LGBTQI+ people ($n = 63, 54.3\%$). Their mean age was 26.07 ($SD = 9.43$) and ranged from 18 to 61 years old. See Table 7 for the detailed demographics.

Internal Consistency

Table 8 presents the reliability analysis for the five dimensions of MIS. For Identity Centrality and Identity Superiority Cronbach α coefficients were estimated and found satisfactory ($\alpha > .70$), while for Identity Uncertainty, Heteronormativity of identity and Acceptance Concerns, the Spearman-Brown technique was used as the number of items was ≤ 3 . Apart from the dimension of “Identity Uncertainty”, the other two dimensions were found with an index of reliability $< .70$, a finding that is not uncommon when items are less than 10 (Herman, 2015); hence, we used the inter-item correlation values as an alternative measure of internal consistency (Taber, 2018) (see next section and Table 8). To conduct a sensitivity analysis, we examined whether standard requirements were fulfilled. The minimum sample size requirement to detect at least 80.00% power is 100 (Yurdugül, 2008), provided that the alpha level is 0.05 and the first eigenvalue obtained from PCA is higher than 3.00. In this study, the sample was 116 and the first factor identified was 3.27.

Cross-scale correlations

Table 9 shows that the correlations for the first and the second sampling phase of each dimension, were $r > .55, p < .001$, confirming the test-retest reliability of the instrument. With respect to inter-item correlations, for both first and second sampling, half of the correlations were found statistically significant and half of them not, suggesting that different constructs of the instrument tap into different -independent- aspects of heterosexual identity.

Table 7

Demographic characteristics presented as mean ± stand. deviation or numbers (%)

	Exclusively heterosexual men, n = 116
Age, years	26.07 ± 9.43
<i>Education</i>	
Primary education	2 (1.8)
Secondary education	18 (15.5)
Bachelor's degree	80 (69.0)
Master's degree	13 (11.2)
PhD	3 (2.6)
<i>Profession</i>	
Public sector	6 (5.2)
Private sector	28 (24.1)
Freelancer	13 (11.2)
Student	67 (57.8)
Unemployed	2 (1.7)
<i>Relationship status</i>	
Single	64 (55.2)
Partnered	36 (31.0)
Married	14 (12.1)
Engaged	1 (0.9)
Divorced	1 (0.9)
<i>Residency</i>	
Metropolitan areas	99 (85.4)
Rural areas	17 (14.6)
<i>Contacts with LGBTIQ+ people</i>	
No	53 (45.7)
Yes	63 (54.3)

Table 8

Cronbach's alpha and Spearman- Brown index for the MIS dimensions

	Time 1	Time 2	N of items
Identity Centrality	.82	.83	5
Identity Uncertainty	.73	.75	3
Identity Superiority	.76	.82	4
Heteronormality of identity	.65*	.67*	2
Acceptance Concerns	.52	.62	3

*Note. Spearman- Brown index .

Table 9
Cross-Scale Correlations for the MIS subscale scores (test – retest) (N = 116)

	Mean	SD	1a.	2a.	3a.	4a.	5a.	1b.	2b.	3b.	4b.	5b.
First sampling												
1a. IC	3.00	1.35	—									
2a. IU	1.29	0.63	-.05	—								
3a. IS	1.46	0.66	.37***	-.07	—							
4a. H	3.55	1.32	.19*	-.38***	.27**	—						
5a. AC	2.56	1.03	.06	.37***	-.05	.60	—					
Second sampling												
1b. IC	3.03	1.30	.70***	-.11	.35***	.40***	.10	—				
2b. IU	1.32	0.65	-.06	.85***	.12	-.38***	.41***	.15	—			
3b. IS	1.42	0.66	.32***	-.08	.80***	.21*	.01	.41***	-.10	—		
4b. H	3.51	1.22	.04	-.39***	.20*	.55***	-.27**	.20*	-.40***	.26***	—	
5b. AC	2.51	0.91	.05	.35***	-.03	-.25**	.71***	.04	.39***	.09	-.25**	—

*Note. IC = Identity Centrality, IU = Identity Uncertainty, IS = Identity Superiority, H = Heteronormativity, AC = Acceptance Concerns, *** $p < .001$, ** $p < .01$, * $p < .05$

Item – total correlations

In Table 10 the item – total correlations are presented. All of them found to be statistically significant, $r > .49, p < .001$, supporting the internal consistency of the instrument (Maltby et al., 2007) and its stability over time (external reliability).

Table 10
Item- total Correlations of the study variables

	First sampling phase			Second sampling phase		
	Mean	SD	Item-total correlation	Mean	SD	Item-total correlation
Identity Centrality						
Item 8	3.23	1.80	.49***	3.34	1.68	.53***
Item 14	3.04	1.79	.86***	2.90	1.67	.84***
Item 15	2.82	1.73	.81***	2.94	1.66	.86***
Item 16	2.84	1.68	.89***	2.90	1.68	.89***
Identity Uncertainty						
Item 1	2.70	1.21	.90***	1.44	1.03	.87***
Item 5	3.04	1.20	.77***	1.20	0.50	.87***
Item 13	3.35	1.22	.81***	1.34	0.77	.82***
Identity Superiority						
Item 4	1.40	0.77	.77***	1.33	0.77	.89***
Item 7	1.27	0.74	.77***	1.21	0.68	.83***
Item 19	1.88	1.17	.77***	1.92	1.14	.80***
Item 22	1.29	0.67	.82***	1.23	0.62	.81***
Heteronormativity of identity						
Item 18	4.37	1.74	.79***	4.34	1.70	.76***
Item 21	2.73	1.67	.77***	2.69	1.61	.72***
Identity Acceptance						
Item 6	1.83	1.43	.74***	1.84	1.42	.75***
Item 9	2.09	1.51	.75***	2.00	1.33	.71***
Item 10	3.77	1.37	.65***	3.71	1.29	.56***

*Note. *** $p < .001$

General Discussion

The aim of the study was to develop a scale that measures dimensions of the male heterosexual identity and assess its psychometric properties. The two studies presented here describe the development and adaptation of the Male Identity Scale (MIS) from the Lesbian Gay Bi Identity Scale (LGBIS) and evaluate the psychometric properties of the 17-item new measure. The analyses showed that the MIS comprises five valid and reliable identity dimensions, namely Identity Centrality, Identity Uncertainty, Identity Superiority, Heteronormativity of identity and Acceptance Concerns. The MIS can contribute to our theoretical understanding of heterosexual male identity which seems to share some characteristics with the homosexual and bi-male identity (Mohr & Kendra, 2011) and may offer researchers an efficient means of assessing aspects of heterosexual identity among men. The five-factor structure of the MIS identified in the factor analyses are in line with the theoretical models of Fassinger and Miller (1996) and Marcia (1987), confirming the dimensions of Identity Centrality, Superiority and Heteronormativity. On the other hand, the dimensions of Identity Uncertainty and Acceptance Concerns are in line with the theory and findings by Worthington et al. (2008) regarding identity exploration and commitment. From that perspective, our work extends and integrates previously theoretical research by providing empirical support to the dimensionality of the heterosexual male identity.

Almost all the MIS dimensions were found to correlate with the BSRI, apart from Acceptance Concerns. Identity Centrality, Superiority and Heteronormativity were found to be positively correlated with the masculine traits and Identity Uncertainty negatively. There were no correlations between male identity dimensions and

feminine traits except for the negative correlation with Identity Superiority. This may imply that stronger feelings of masculinity forge stronger beliefs in the male privilege in society. Consistent with this interpretation, the single negative correlation of Superiority with femininity suggests that the conscious self-perception of enjoying the heterosexual male privilege is incompatible with the expressive characteristics of femininity. Apparently, having a full range of masculine traits is more important for the male heterosexual identity than possessing few feminine ones. Moreover, heterosexual male worth, as measured by the Masculinity Contingency Scale (MCS), seems to be enhanced by the dimensions affirming rather than questioning heterosexual identity. Conclusively, these findings point to a masculine identity that still manifests the socially typical for the male gender characteristics (Bem, 1974).

Furthermore, different MIS dimensions predicted either positively or negatively Self-esteem, SOI, Attachment Avoidance and Anxiety. In more detail, Identity Centrality positively predicted Self-esteem and Anxiety, while negatively predicted Attachment avoidance. The more someone perceives MIS sexual identity as a central part of his global identity, the more likely he is to feel higher Self-esteem, possibly due to the highly socially desirable heterosexual orientation. At the same time however, preserving social acceptance by maintaining the masculine self-stereotype may be a source of high Attachment anxiety, that is of fear of being rejected by others (Brennan et al., 1998) for not meeting the high standards of masculinity or an unreconciled heterosexuality (Haizlip, 2009). Also, the centrality and stability of manhood seem to support Attachment avoidance, that is higher emotional closeness with others (Brennan et al., 1998), in a motion to gain acceptance, possibly through the secure normativeness of the heterosexual intimate couple. Identity Uncertainty predicts higher Avoidance. In line with the above findings of Identity Centrality, Identity Uncertainty seems to undermine emotional closeness, perhaps out of fear of being rejected or challenged for one's unresolved heterosexuality (Haizlip, 2009) and substandard masculinity. Identity Superiority predicted a lower degree of seeking permissive sexual contacts (Sociosexual Orientation, SOI). According to the traditional stereotypes regarding men's sexual dispositions (Siegel & Meunier, 2019), men tend to be more sexually adventurous than women and men who exhibit more masculine characteristics tend to be less unrestricted in their sociosexual desire as opposed to heterosexual men with more feminine traits or homosexual men (Waldis et al., 2020). Consistent with this pattern is the finding that higher levels of Heteronormativity were associated with higher Self-esteem and higher levels of seeking uncommitted sexual encounters (SOI). This finding alludes to the social approval of masculine permissive sexuality and the "double standard", while confirming that it fosters the self-esteem of the stereotypic heterosexual male. Acceptance Concerns predict lower Self-esteem and Attachment avoidance but higher anxiety. Again, fitting in the context of our findings, heterosexual men who are still exploring their sexuality, are possibly men met with societal challenge and disapproval that undermines their Self-esteem, fuels their anxiety of rejection in their intimate relationships for being "less of a man" and encourages their secure intimate attachments who have already embraced their divergent heterosexuality (Landot et al., 2004).

Our evaluation of the validity and reliability of the MIS dimensions suggest that the newly constructed instrument can be securely used for research purposes. Mean internal consistency estimates ranged from .67 to .85 and 3-week test-retest correlations ranged from .55 to .85. Temporal stability was lowest ($r = .55$) for Acceptance Concerns and highest ($r > .73$) for Identity Superiority, Centrality and Heteronormativity. These disparities in stability may reflect differences in the degree to which dimensions of heterosexual identity are influenced by situational factors. For example, one's concerns for his heterosexual orientation depend more on immediate social context. For example, one's identity may be challenged by rejection in an intimate relationship, or he may be in contact with LGBTQI+ people or simply he may be exploring his sexual orientation at that period. The multidimensionality of heterosexual male identity (as in all identities) secures adaptational flexibility and psychosocial functionality, as the personal narrative of one's identity is changing over time through superiority, centrality, etc. before reaching full cohesion (Mohr & Kedra, 2011).

Limitations and recommendations for future studies

The MIS relies on robust methodology, integrating empirical findings with perspectives from theory and practice. This combination may contribute to the scale's relevance and usefulness. As a valid and reliable self-assessment scale, it may enable studies with large populations to empirically examine the experiences involved in the various aspects of heterosexual identity over time, in different ages and settings. Thus, it can help us better understand the structure of the heterosexual identity, its development, and its implications. For instance, studies

may explore how identity aspects such as Identity Superiority, Centrality and Heteronormativity may affect the thoughts and practices of men in relating to others in various forms of relationships, including intimate ones.

Although preliminary evidence supported the reliability and validity of MIS scores, it is important to highlight some limitations of the present studies and of the measure itself. One significant limitation concerns the degree to which the psychometric properties of the MIS could vary for different populations. All participants belong to a homogeneous population of white male university undergraduate male students. The structure and correlates of the MIS may differ for people whose life contexts dictate a different understanding and response to demands defining one's identity, including the male heterosexual one. Despite the clear factorial structure, the overall strong factor loadings and the high communalities, weak items should be further assessed, in particular for the less robust sub-factors, Heteronormativity of Identity and Acceptance Concerns. To ensure items' validity in future studies, we recommend recruiting women and conducting semi-structured interviews with both heterosexual males and females prior to using the scale. This may help in making adjustments to enhance participants' understanding of the items. Important next steps are to further translate and validate the scale in other languages for use in different cultural contexts.

Lastly, to increase the scale's convergent / discriminant validity, additional measurements can be employed to investigate masculine ideals and dimensions of heterosexual identity, such as the Gender Role Attitudes Scale (GRAS) (García-Cueto et al., 2015), the Support for Gender Equality among Men Scale (Sudkämpe et al., 2019) and the Gender Role Beliefs Scale (GRBS) (Kerr & Holden, 1996). The MIS could also be tested with measurements that have repeatedly been found to be associated with the overemphasis on the male gender roles (e.g., Rodríguez Castro et al., 2010), such as the Hostility Towards Women Scales (Check et al., 1985), the Gender Role Conflict Scale (O'Neil et al., 1986) and the Adversarial Heterosexual Beliefs Scale (Lonsway & Fitzgerald, 1995).

Practical implications and conclusion

The findings in this study have several implications for future research and practice in the field. The MIS could also be useful to practitioners, by increasing the understanding of heterosexual identity implications at the macro, meso, and micro level, not only to improve specific models about sexual identity but also to increase public awareness and discourage maladaptive behaviours in a swiftly changing society. Both globally and in Greek society, gender roles seem to be in transition from the more restricted traditional heteronormative masculine and feminine prototypes to more loosely defined ones (Lampropoulou & Archakis, 2015; Mahalik, 2000; Mihail, 2006; Sotiriou et al., 2011). While many Greek men seem to adapt well to these societal changes, many others are still lingering on traditional stereotypes resulting in incidents of violence against LGBTIQ+ people, against men who manifest more femininity traits, and against women, including femicides (Kathimerini, 2021). Moreover, maladaptation to the changing nature of gender roles is likely to interfere with relationship satisfaction, relationship adjustment, and communication in intimate partners (Closson et al., 2020; Pourshahbaz et al., 2020).

Acknowledgments

We thank Ioanna Fotopoulou for her contribution to recruiting participants and for her valuable contribution to many of the study analyses.

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ΕΜΠΕΙΡΙΚΗ ΕΡΓΑΣΙΑ | RESEARCH PAPER

Κατασκευή και στάθμιση κλίμακας για τη μέτρηση των διαστάσεων της ανδρικής ετεροφυλόφιλης ταυτότητας: η Κλίμακα Ανδρικής Στρέιτ Ταυτότητας (ΚΑΣΤ)

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ΛΕΞΕΙΣ ΚΛΕΙΔΙΑ	ΠΕΡΙΛΗΨΗ
Κλίμακα ανδρικής ετεροφυλόφιλης ταυτότητας, Κλίμακα μέτρησης ταυτότητας, Ψυχομετρικές ιδιότητες, LGBIS, Έλληνες στρέιτ άντρες	Η παρούσα έρευνα παρέχει προκαταρκτικά ψυχομετρικά δεδομένα για μία κλίμακα αυτοαναφοράς, την Κλίμακα Ανδρικής Στρέιτ Ταυτότητας (ΚΑΣΤ), σχεδιασμένη για να αξιολογεί τις διαστάσεις της ανδρικής ετεροφυλόφιλης ταυτότητας. Προσαρμόστηκε από την Κλίμακα της Λεσβιακής, Γκέι και Αμφιφυλόφιλης Ταυτότητας (Mohr & Kedra, 2011) και στηρίχθηκε στα θεωρητικά μοντέλα των Marcia (1987) και Worthington et al. (2002) σχετικά με την ανάπτυξη της ετεροφυλόφιλης ταυτότητας. Διεξήχθησαν δύο μελέτες για την αξιολόγηση της εγκυρότητας και της αξιοπιστίας της ΚΑΣΤ. Στη Μελέτη 1 (n = 563 στρέιτ άνδρες) Διερευνητική Παραγοντική Ανάλυση και Επιβεβαιωτική Παραγοντική Ανάλυση υποστήριξαν τη δομή πέντε παραγόντων οι οποίοι αντανακλούσαν τις εξής διαστάσεις: Ανησυχίες Αποδοχής, Αβεβαιότητα Ταυτότητας, Ανωτερότητα Ταυτότητας, Κεντρικότητα Ταυτότητας και Ετεροκανονικότητα. Οι προβλεπόμενες συσχετίσεις με εργαλεία μέτρησης σχετικά με την αρρενωπότητα και την ψυχοκοινωνική λειτουργία παρείχαν προκαταρκτικά στοιχεία εγκυρότητας για τις βαθμολογίες στην ΚΑΣΤ σε πληθυσμό φοιτητών. Η Μελέτη 2 (n = 116 στρέιτ άνδρες) παρείχε ευρήματα που υποστηρίζουν την αξιοπιστία της κλίμακας μέσα από αναλύσεις ελέγχου – επανελέγχου και εσωτερικής συνάφειας των λημμάτων της ΚΑΣΤ. Και οι δύο έρευνες υποστηρίζουν την χρήση της ΚΑΣΤ, η οποία μπορεί να προσφέρει στους ερευνητές ένα αποτελεσματικό εργαλείο αξιολόγησης των πολλαπλών διαστάσεων της ετεροφυλόφιλης ταυτότητας στους άνδρες.
ΣΤΟΙΧΕΙΑ ΕΠΙΚΟΙΝΩΝΙΑΣ	
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