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Research Article

Clinical evidence in sexual orientations: definitions, neurobiological profiles, and psychological implications

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Abstract

Purpose: The aim of this research is to detect any clinical evidence in patients on the basis of their sexual orientation choice. The starting hypothesis, taking into account the neurobiological and endocrinological data of the last twenty years on the subject of sexual orientation, is to demonstrate an increase in psychopathological indexation in non-heterosexual patients, and then to detect among the possible psychological causal hypotheses which indicators are most present in the individual clinical history, in order to demonstrate that sexual orientation other than heterosexuality is an adaptation to a previous psychological trauma with a strong emotional and sexual impact. This research work aims to answer the following one question: "Are there any dysfunctional psychological factors that occur more frequently in any of the five identified groups?".

Methods: Clinical interview and administration of the PICI-1 and PSM-1.

Results: In the male heterosexual group, the psychopathological values were 43.96%, with a greater presence of neurotic disorders, while in the female heterosexual group, the values were 57.27%, with the same majority found in the male group. In the male homosexual group, the psychopathological values were 66%, with a greater presence of neurotic disorders, while in the female homosexual group, the values were 76.97%, with the same majority found in the male group. In the male bisexual group the psychopathological values were 76.44%, with a greater presence of neurotic disorders, while in the female bisexual group the values were 70%, with the same majority as in the male group. In the groups related to the other sexual orientations (bi-curiosity, asexuality and pansexuality), none of the respondents ticked "None of the above", thus endorsing the thesis that at least one of these factors could be a concomitant cause of the onset of non-heterosexual preference. With reference to the results obtained from the PSM-1, to the question "Are there dysfunctional psychological factors that occur more frequently?" the ticking of "None of the above" emerges in half of the respondents and tends to decrease to zero in the non-heterosexual orientations, confirming the trend already underlined.

Conclusions: The topic under consideration is very thorny, more for its socio-political implications than for its clinical ones. Here, in fact, is not at stake any judgment of merit or form, but the exact clinical placement in the cognitive and experiential framework. These considerations are completely detached and far from any form of judgment or condemnation ethical, moral, social and personal. On the subject of the pathologization of sexual orientations other than heterosexuality, between the two theses under discussion (confirmation, on the one hand, or disconfirmation, on the other), this research suggests the "median" position that on the one hand confirms the non-pathological nature of sexual orientations other than heterosexuality in itself (since there is no scientific evidence to the contrary), but on the other confirms the hypothesis that, on the basis of the person's experience, psychopathological conditions can coexist that require psychotherapeutic intervention, regardless of the orientation in itself. In conclusion, therefore, significant data emerge from this research in favor of the psychological etiological hypothesis (even if the writer adheres to the multi-causal hypothesis) according to which in sexual orientations other than heterosexuality there is a marked indexation of psychopathological and dysfunctional traits compared to the heterosexual group, with the presence of causal indicators identified in PSM-1 in increasing numbers in the same non-heterosexual groups. These data would support the hypothesis that non-heterosexual orientations could actually be the adaptive consequence of a psychological trauma, with a strong emotional and sexual impact (including abuse, violence, neurobiological, hormonal, and somatic predispositions, affective-emotional dysregulation with reference figures, and socio-environmental and family readjustments), in itself therefore not pathological but circumstances favoring negative and unfavorable dynamics, of social and environmental matrix, such as to favor or aggravate psychopathological conditions, including mood, depressive, obsessive, somatic, personality and suicidal disorders.

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Contents of the manuscript

Introduction and background

In the last thirty years, neurosciences have been very interested in the study of the correlation between sexual orientation (intended as a form of emotional, sentimental and / or sexual attraction of a person to another person regardless of the biological sex of belonging or his sexual identity) and certain neurobiological and neurophysiological components, capable of demonstrating the existence or otherwise of the direct relationship. Sexual orientation, properly so called, is therefore a lasting model towards another subject. From the second half of the twentieth century, the first idea of "homosexuality" was declassified, moving from the psychopathological condition inherent to the sociopathic personality disorders of the 1954 version of the *Diagnostic and Statistical Manual of Mental Disorders* (DSM) to the sexual deviance of 1968, only to gradually become an ego-dystonic form of one's own in 1974 sexual perception and finally a natural sexual orientation only in 1987 and in the revised version of 1990, being finally decriminalized reeds by the *International Statistical Classification of Diseases, Accidents and Causes of Death* (ICD) of 17 May 1990, although psychoanalytic thinking was well oriented towards the opposite; in fact, homosexuality had hitherto been considered a "morbid obsession" (Charcot), a "sexual psychopathy" (von Krafft-Ebing), an "arrest of normal development" (S. Freud), a "narcissistic fixation" (Ferenczi), a "neurotic escape" (Adler) or a "parapathic neurosis that originates from the conflict between instinct and inhibition" (Stekel). However, this evolution has certainly led to an opening towards social rights but also to a fluidity in sexual orientation, where the main problems emerge especially in the bisexual position [1]. The legal status of homosexual relationships varies enormously from one state to another and there still remain jurisdictions in which some homosexual behavior is considered a crime and punished with severe penalties (imprisonment), up to capital punishment (death); this still happens in many African and Middle Eastern countries. Sexual orientation is therefore commonly debated as a characteristic of the individual, as well as for biological sex, gender identity or age. However, this perspective is incomplete, since sexual orientation is always defined on the basis of relational terms and necessarily concerns relationships with other individuals. Sexual acts and romantic attractions are categorized as homosexual or heterosexual based on the biological sex of the individual involved in them, relative to the partners. Indeed, it is through performance - or the desire to lend - with another person that individuals express their heterosexuality, homosexuality or bisexuality. Thus, sexual orientation is fully connected to the intimate personal relationships that human beings form with others to meet their deepest sentimental needs for love, bond and intimacy. In addition to sexual behavior, these constraints include not-sexual physical affections between partners, sharing goals and values, mutual support and constant commitment. Consequently, sexual orientation is not merely a personal characteristic that can be defined in isolation. Likewise, one's sexual orientation defines the universe of people with whom a person is able to find satisfying and fulfilling relationships which, for many individuals, comprise an essential component of personal identity [1-67].

From a neurobiological point of view, robust evidence shows that between heterosexual and homosexual brains, there are significant structural and functional differences in different areas (thalamus, hypothalamus, basal ganglia, amygdala, corpus callosum, frontal lobe, grey matter and cerebral cortex) [68-97]; more than interesting, the analyzes regarding these directly related aspects appear, contextualising: any differences between the "homosexual tendency" (determined perhaps by paraphilic or post-traumatic adaptive factors) and the precise and conscious decision to perceive one's balance in the "homosexual or bisexual condition" (therefore the de facto choice of orientation); any that allow to clearly distinguish comorbid conditions (such as anxiety disorders, eating disorders, depressive disorders, panic, obsessions, behavioral addictions and suicidal risk) from the choice homosexual or bisexual (and whether the latter is able to feed the comorbid conditions); the differences between highly adaptive and functional conditions from those that cause the patient to feel unwell and dysfunctional [98-106].

The direct and indirect implications on the confirmation of the clinical hypothesis of the homosexual and / or bisexual condition would bring further complications, with reference to the management of the patients' treatments and therapies, while making important differences between highly adaptive patients and those who perceive their condition as dysfunctional with respect to the surrounding environment. The question to ask, in this theoretical hypothesis, is whether we must actually intervene clinically to correct the homosexual or bisexual condition and lead the patient towards a heterosexual orientation, or simply accompany him towards a better perception of his emotions, desires and needs strategically [107-109].

Research objectives and methods

Starting therefore from the psychological aetiological hypothesis, as stated in the introduction to this research work, that sexual orientations other than homosexuality could in reality be the consequence of an adaptation to particularly destabilising traumatic events in the emotional and family sphere of the person, the present research aims to identify the possible psychological causes capable of justifying a preference other than heterosexuality.

For the purposes of this research, other possible causes that are not directly linked to a psychological nature are therefore excluded.

In order to facilitate the research work, a specific questionnaire (*Perrotta Individual Sexual Matrix Questionnaire, PSM-1*) [110] has been selected, capable of providing anamnestic information and data on the emotional, emotional and family sphere, which will be submitted to the selected sample of the population together with the *Perrotta Integrative Clinical Interview, PICI-1 (TA version)* [11-113], taking into account the age, in order to facilitate the identification of

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any psychopathologies or dysfunctional personality traits not declared by the respondent.

The phases of the research were divided as follows:

1) Selection of the population sample divided into six groups (A, B, C, D, E, F) as indicated in section 3 of this research work.

2) Administration of the PICI-1 to each population group.

3) Data processing following administration.

4) Administration of the PSM-1 (sections A, B, C, D), to each population group.

5) Data processing following administration.

6) Comparison of data obtained.

This research work aims to answer the following one question: *Are there any dysfunctional psychological factors that occur more frequently in any of the five identified groups?.*

Setting and participants

The requirements decided for the selection of the sample population are:

1) Age between 18 years and 75 years.

2) Italian nationality, with Italian ancestors in the last three generations.

3) Sexually active, with experience of at least 2 years.

4) Specific declaration of sexual orientation.

The selected setting, taking into account the protracted pandemic period (already in progress since the beginning of the present research), is the online platform via Skype and Videocall Whatsapp, both for the clinical interview and for the administration.

The present research work was carried out from April 2020 to December 2020.

The selected population sample is 1430 participants, divided into six groups:

A) Heterosexuality (attraction to people of the opposite sex), in total of 818 and divided into: 380 males and 438 females.

B) Homosexuality (attraction to people of the same sex), in total of 470 and divided into: 414 males and 56 females.

C) Bisexuality (attraction to people of both main sexes), in total of 88 and divided into: 68 males and 20 females.

D) Bi-curiosity (attraction to people of both main sexes, while identifying with heterosexuality), in total of 26 and divided into: 20 males and 6 females.

E) Asexuality (little or no interest in sexuality or lack of identification), in total of 16 and divided into: 10 males and 6 females.

F) Pansexuality (attraction regardless of identity and orientation), in total of 12 and divided into: 4 males and 8 females.

	Male	Female	Total
Heterosexuality	380	438	818
Homosexuality	414	56	470
Bisexuality	68	20	88
Bi-curiosity	20	6	26
Asexuality	10	6	16
Pansexuality	4	8	12
Total	896	534	1430

All participants were guaranteed anonymity.

Results, limits and possible conflicts of interest

After the selection of the chosen population sample (first stage), the PICI-1(TA) results were administered (second stage) and processed (third stage), obtaining the following results:

	Male	PICI-1 results (M)*	Female	PICI-1 results (F)*
Heterosexuality	380	Cluster A = 82 (22,96%) Cluster B = 67 (18,76%) Cluster C = 8 (2,24%)	438	Cluster A = 138 (31,74%) Cluster B = 101 (23,23%) Cluster C = 10 (2,3%)
Homosexuality	414	Cluster A = 173 (41,52%) Cluster B = 93 (22,32%) Cluster C = 9 (2,16%)	56	Cluster A = 31 (55,49%) Cluster B = 9 (16,11%) Cluster C = 3 (5,37%)
Bisexuality	68	Cluster A = 26 (38,22%) Cluster B = 22 (32,34%) Cluster C = 4 (5,88%)	20	Cluster A = 8 (40%) Cluster B = 5 (25%) Cluster C = 1 (5%)
Bi-curiosity	20	Cluster A = 9 (45%) Cluster B = 3 (15%) Cluster C = 0	6	Cluster A = 2 (33,34%) Cluster B = 1 (16,67%) Cluster C = 0
Asexuality	10	Cluster A = 0 Cluster B = 6 (60%) Cluster C = 4 (40%)	6	Cluster A = 0 Cluster B = 3 (50%) Cluster C = 3 (50%)
Pansexuality	4	Cluster A = 0 Cluster B = 3 (75%) Cluster C = 1 (25%)	8	Cluster A = 0 Cluster B = 6 (75%) Cluster C = 2 (25%)

*For the PICI-1(TA), cluster A groups disorders of the neurotic area, cluster B groups borderline disorders and cluster C groups disorders of the psychotic area.

Subsequently, the same sample of the population was subjected (fourth stage) to the PSM-1 (sections A, B, C, D) and data processing (fifth stage). The last phase of the research (sixth phase) focused on comparing the data obtained during the third and fifth phases. Indeed, the results are:

The limitations of the research are mainly centred on the non-representative sample with respect to minority sexual orientations, due to difficulties in finding participants; however, given the exceptional nature of the results obtained, the writer suggests greater attention be paid to the subject, perhaps with a more representative sample of the population. In addition, the PICI-1 and PSM-1 are not yet standardised psychometric instruments but are proposed, despite the excellent results obtained and already published in international scientific journals [111-113].

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	Male (M)	PSM-1 results (M)		Female (F)	PSM-1 results (F)	
Heterosexuality	380	1* 2* 3* 4* 5* 6* 7* 8*	23 (6,1%) 50 (13,1%) 21 (5,6%) 47 (12,6%) 21 (5,5%) 1 (0,3%) 21 (5,7%) 196 (51,1%)	438	1* 2* 3* 4* 5* 6* 7* 8*	38 (8,6%) 65 (14,9%) 21 (4,7%) 37 (8,4%) 15 (3,3%) 0 45 (10,2%) 217 (49,9%)
Homosexuality	414	1* 2* 3* 4* 5* 6* 7* 8*	61 (14,7%) 40 (9,6%) 83 (19,9%) 103 (24,7%) 20 (4,8%) 2 (0,6%) 71 (17,2%) 34 (8,2%)	56	1* 2* 3* 4* 5* 6* 7* 8*	16 (28,6%) 10 (17,9%) 8 (14,3%) 7 (12,5%) 2 (3,5%) 1 (1,7%) 8 (14,3%) 4 (7,2%)
Bisexuality	68	1* 2* 3* 4* 5* 6* 7* 8*	15 (22,1%) 21 (30,8%) 11 (16,2%) 9 (13,3%) 3 (4,5%) 1 (1,4%) 8 (11,7%) 0	20	1* 2* 3* 4* 5* 6* 7* 8*	3 (15%) 3 (15%) 4 (20%) 4 (20%) 1 (5%) 0 5 (25%) 0
Bi-curiosity	20	1* 2* 3* 4* 5* 6* 7* 8*	1 (5%) 3 (15%) 3 (15%) 2 (10%) 3 (15%) 0 8 (40%) 0	6	1* 2* 3* 4* 5* 6* 7* 8*	1 (16,67%) 1 (16,67%) 1 (16,67%) 2 (33,32%) 0 0 1 (16,67%) 0
Asexuality	10	1* 2* 3* 4* 5* 6* 7* 8*	3 (30%) 0 2 (20%) 2 (20%) 0 0 3 (30%) 0	6	1* 2* 3* 4* 5* 6* 7* 8*	2 (33,34%) 0 1 (16,67%) 1 (16,67%) 0 0 2 (33,34%) 0
Pansexuality	4	1* 2* 3* 4* 5* 6* 7* 8*	1 (25%) 0 1 (25%) 1 (25%) 0 0 1 (25%) 0	8	1* 2* 3* 4* 5* 6* 7* 8*	2 (25%) 0 2 (25%) 2 (25%) 0 0 2 (25%) 0

* 1. Sexual abuse or physical violence in childhood and/or preadolescence; 2. Psychological abuse with a sexual connotation (coercion and/or submission) in childhood and/or preadolescence; 3. Dysfunctional caring on the part of the caregiver during the attachment period (0-6 years); 4. Unbalanced intra-parental relationship; 5. Overexposure to pornography in childhood and/or preadolescence; 6. Clinically certified sex hormone imbalance; 7. Cetified medical history of one or both parents of severe mental and/or personality disorders; 8. None of the above.

Since the research is not financed by anyone, it is free of conflicts of interest.

Are non-heterosexual sexual orientations to be considered pathological?

The current generally accepted clinical position on homosexuality and other orientations other than heterosexuality [1], since the 1970s, is to consider them not pathological but simply a normal variation of sexual behavior; in particular, the American Psychiatric Association (APA), in 1973, removed homosexuality from the list of mental pathologies, based on two main considerations:

a) Pathologizing had mistakenly occurred as a result of adherence to the psychodynamic ideal that imposed the thesis on the biological and natural approach, according to which sexual reproduction could only occur exclusively between two persons of the opposite sex. This theoretical approach has conditioned scientific and literary thought, crystallizing in 1952, in the DSM psychodiagnostic manual, in the form of "sociopathic personality disorder" and in 1968 in the form of "sexual deviation" (like the current paraphilias). With the advent of the 1970s, the basic idea was to depathologize homosexuality by first distinguishing between

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"egosyntonic homosexuality" and "egodistonic homosexuality" (on the basis of the more or less serene acceptance of one's position); in this sense, in the third edition of the manual, only the egosyntonic form was first removed, precisely because it was accepted by the patient. Finally, only in 1987 and in the revision of 1993 was also definitively eliminated the wording egodystonic to promote the total depathologizing. With the advent of a global revision of psychoanalytic thought, strongly critical of homosexuality, this process could be favored.

b) The idea that homosexuality and in general any other orientation different from heterosexuality can be pathological is not supported by any scientific data but only by theoretical elaborations of classical psychoanalytic thought, which then laid the groundwork (along with the elaborations of cognitive-behavioral thought) to found the clinical approach of psychopathologies.

On the contrary, those who support the pathological nature state that [1,114-116]:

a) The psychodynamic approach represents the foundation of world psychological thought, and therefore its theorizations are still valid and considered shareable today (and therefore it is not clear why on homosexuality such assumptions are considered wrong).

b) The depathologization has been a process decided at the table, by a commission of experts, without making use of scientific data, but on the basis of an attack to the psychoanalytic foundations and on the basis of a strong social and political drive resulting from the uprisings of '68, considering that the empirical research produced in support of the thesis of depathologizing homosexuality, such as Hooker's studies, had been conducted with population samples (30 heterosexuals and 30 homosexuals) far from being considered relevant, statistical and representative [116-146].

c) Depathologizing has normalized a sexual behavior that, in the extreme, if it were applicable to all human beings, would have led to the extinction of man, because in the absence of heterosexual reproductive couplings, the human race could not continue to exist in the medium to long term.

d) Recent neurobiological studies have shown, in selected population samples, a significant structural and functional difference of the encephalon between heterosexuals and homosexuals, outlining a marked hypofunctionality or hyperfunctionality of certain areas; conditions that, if they had been found in selections for the study of psychopathologies, would have significantly confirmed the pathological hypothesis.

The writer, in this regard, in relation to the studies carried out, publications and research results, suggests a position between the two extremes certainly median.

In particular, if on the one hand psychoanalytic theorizations were often speculative and theoretical, on the other hand neurobiological data outline a precise path; just as it is true that the revolutionary movements of '68 were the social and political basis that has pushed for a depathologization of homosexuality, it is equally true that the pathological condition is such if it has certain aspects related to the malaise and well-being of the individual, clear of generalizations, preconceptions and prejudices.

The writer therefore intends to clarify that in light of the evidence no data currently in the possession of the scientific community demonstrates clearly and incontrovertibly that sexual orientation other than heterosexuality is a pathological condition.

Some data, in particular, in the opinion of the writer, are interesting precisely because of their peculiarity:

The dynamics described by psychoanalysis are the product of an interpretive process that often takes into account rigid theoretical positions and not the actual narrated and experienced by the patient, forcing him to unconscious journeys that do not work on the "here and now", focusing more on the whys and not on the solutions to the proposed problem. In this sense, defining homosexuality as pathological only on the basis of theoretical assumptions is scientifically incorrect.

The depathologizing of homosexuality has been a process without the use of scientific data and on the basis of a strong social and political impetus resulting from the uprisings of '68. Therefore, both pathologizing and declassification lack scientific evidence; on that basis, both could be as correct as incorrect.

The biological hypothesis according to which if we were all homosexuals there would be the extinction of the human race is essentially correct, but this assumption is an extreme theoretical hyperbole that does not take into account internal (psychological) and external (social) conditioned factors; therefore, it has no scientific value to support the biological hypothesis according to this point of view, remaining a simple theoretical speculation.

Recent neurobiological studies have shown, in selected population samples, a significant structural and functional difference of the encephalons between heterosexuals and homosexuals, outlining a marked hypofunctionality or hyperfunctionality of certain areas; conditions that, if they had been found in selections for the study of psychopathologies, would have significantly confirmed the pathological hypothesis. This position is partly correct, because it takes into account scientific evidence but, in the opinion of the writer, does not take into account the fact that almost always the sample of the population selected is not representative, because of the costs of research, and also does not take into account that neurobiological trends can facilitate a certain predisposing dynamic but can not be in itself considered (regardless) pathological for the sole fact of being present. An obvious example is neuroplasticity in psychological trauma

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and the impact of the EMDR technique that is able to "move" the area of trauma to another area following psychological reworking. Certainly, the structural and functional differences found are interesting, but these studies deserve further study before being considered scientific evidence of the morbidity of homosexuality.

Having said this, the writer, in relation to the data obtained from the present study, illustrates the theoretical hypothesis that he defines as "median" with respect to the two poles "pathological - non-pathological". From the PSM-1 it emerges that about 50% of the sample of heterosexual population did not sign any of the reasons belonging to the list of causes pertaining to section B of the questionnaire (sexual abuse or physical violence in childhood and/or preadolescence, psychological abuse with a sexual connotation -coercion and/or submission- in childhood and/or preadolescence, dysfunctional caring on the part of the caregiver during the attachment period 0-6 years, unbalanced intra-parental relationship, overexposure to pornography in childhood and/or preadolescence, clinically certified sex hormone, imbalance, cetified medical history of one or both parents of severe mental and/or personality disorders), while in the categories other than heterosexuality this figure tends to decrease progressively until it reaches zero, demonstrating how such causes could be the psychological reasons behind the perceived sexual orientation. In this sense one could "ideally" speak of a "functional adaptation" to one or more psychophysical traumatic events. However, this assumption, even if the sample is representative, cannot explain the phenomenon in its entirety, other than to provide further food for thought on the subject. What remains, from a psychological point of view, is certainly that the central theme is not so much that of understanding the pathological matrix of the orientation as it is that of reasoning about the person's perception and his or her experience, in order to understand whether he or she is in hegosyntony or hegodystonia with respect to his or her emotions and drives. This position, in the opinion of the writer, is "median" because on the one hand it confirms the non-pathological nature of sexual orientations other than heterosexuality (since there is no scientific evidence to the contrary), but on the other hand it confirms the hypothesis that, on the basis of the person's experience, psychopathological conditions can coexist that require psychotherapeutic intervention.

Conclusions

Processing the data obtained from the selected population sample, the following results emerge:

1) Representativeness of the population sample: Although the population sample in the heterosexual and homosexual groups is significant, it is not sufficiently representative to obtain reliable and valid statistical data, despite the high symbolism of the data obtained. Moreover, the small population sample of subjects who declare themselves to have an orientation that is in any case different from heterosexuality, homosexuality and bisexuality does not allow assessments to be made that have statistical reliability, despite the fact that clear and significant values emerge, such as the total absence of a marking "None of the above" in favour instead of points 1 (sexual abuse or physical violence in childhood and/or preadolescence), 3 (dysfunctional caring on the part of the caregiver during the attachment period), 4 (unbalanced intra-parental relationship) and 7 (cetified medical history of one or both parents of severe mental and/or personality disorders), which are constantly repeated in those groups. If we were to group them together in the "Other orientations" group alone, the data would be more significant, although they would not be representative:

	Male (M)			Female (F)		
Other sexual orientationsc	34	1*	5 (14,7%)	20	1*	5 (25%)
		2*	3 (8,82%)		2*	1 (5%)
		3*	6 (17,64%)		3*	4 (20%)
		4*	5 (14,7%)		4*	5 (25%)
		5*	3 (8,82%)		5*	0
		6*	0		6*	0
		7*	12 (35,28%)		7*	5 (25%)
		8*	0		8*	0

With such a graphic representation it is easier to make other considerations:

a) Among the proposed causal hypotheses, no respondent initialled the item "None of the above", endorsing the thesis that at least one of those factors may be a concomitant to the onset of non-heterosexual preference.

b) Among the causal hypotheses proposed, the highest and most repeated values are always nos. 1 (sexual abuse or physical violence in childhood and/or preadolescence), 3 (dysfunctional caring on the part of the caregiver during the attachment period), 4 (unbalanced intra-parental relationship) and 7 (cetified medical history of one or both parents of severe mental and/or personality disorders).

c) In the male group, the highest marking is No. 7 (cetified medical history of one or both parents of severe mental and/or personality disorders), while in the female group the values are all identical, suggesting that these causal hypotheses have a greater value in the onset of the preferred choice.

d) Such significant values leave room for a very precise causal interpretation: sexual orientations other than heterosexuality, homosexuality and bisexuality are actually adaptations to traumatic events that have an impact on the respondent's emotional and sexual sphere.

2) Results obtained by PICI-1: **Here is the data analysis**

a) In the male heterosexual group, psychopathological values stood at 43.96%, with a greater presence of neurotic disorders, while in the female heterosexual group, values stood at 57.27%, with the same greater presence as in the male group.

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b) In the male homosexual group, the psychopathological values settled at 66% with a greater presence of neurotic disorders, while in the female homosexual group, the values settled at 76.97% with the same greater presence of the male group.

c) In the male bisexual group, the psychopathological values settled at 76.44% with a greater presence of neurotic disorders, while in the female bisexual group the values settled at 70% with the same greater presence of the male group.

d) In the groups relating to the other sexual orientations, the considerations already expressed in point 1 of the conclusions apply.

The present analysis thus reveals significant dysfunctional presences in the specific traits, which become increasingly more significant when the homosexual group and the bisexual group are taken into consideration, revealing a possible psychopathological relationship of the non-heterosexual conditions (now considered orientations).

3) ***Results obtained from PSM-1*:** The following is an analysis of the data in order to answer the question "Are there any dysfunctional psychological factors that occur more frequently in any of the five identified groups?":

a) In the male (50.96%) and female (49.91%) heterosexual group, the presence of the marking "None of the above" emerges in half of the respondents and, although the other indicators are present, they are all fairly balanced, with a greater propensity for items 2 (psychological abuse with a sexual connotation (coercion and/or submission) in childhood and/or pre-adolescence) and 4 (unbalanced intra-parental relationship).

b) In the homosexual group the same discourse made in point 1 is valid, with some variations: also point 1 (sexual abuse or physical violence in childhood and/or preadolescence) and 3 (dysfunctional caring on the part of the caregiver during the attachment period, 0-6 years) come into play in a significant way, and the presence of the marking "None of the above" is clearly inferior (8.16% in male and 7.16% in female). This profile would lead one to think that in the homosexual group the greater presence of the dysfunctional indicators would confirm the aetiological hypothesis of a psychological nature.

c) In the bisexual group, the discourse addressed in point 2 is even more marked: all the indicators come into play except "None of the above" which is never marked, both in the male and in the female group. This profile would strengthen the conclusive hypothesis stated in point 2.

d) In the groups relating to the other sexual orientations, the considerations already expressed in point 1 of the conclusions apply.

The topic under consideration is very thorny, more for its socio-political implications than clinical ones. Discussing the reasons for a correct inclusion or exclusion of this category in the DSM certainly represents both an excellent exercise of nomenclature, in order to also verify the quality and validity of a definition of mental illness, and to better define the related clinical picture in relation to the anamnestic profiles of the patient. In this context, it is necessary to omit the socio-political and anthropological aspects, and all the possible legal repercussions determined by the hypothesis confirming homosexuality as a mental pathology. In fact, there is no judgment of merit or form at stake here, as much as the exact clinical location in the cognitive and experiential sphere of the mental health professional. These considerations are completely detached and far from any form of ethical, moral, social and personal judgment or condemnation; at most, the intention is to make a de facto contribution to the clinical cause, trying to overcome any preconceptions and prejudices typical of a dysfunctional social subculture reaching out towards the isolation and ghettoization of the homosexual or bisexual person. Net from a position contrary to personal freedom, the sacrosanct civil rights struggles of the last decades are welcome, to recognize equal conditions and not discriminate against any person regarding their sexual choice. Here, therefore, at stake, there is no condemnation of a category but simply the stance of a strictly clinical evaluation, also in light of the neurobiological results of recent years. Research on the relationship between neuroscience and sexual orientation is still in its infancy, despite the numerous progress made and the finding of substantial elements capable of supposing that the neuroanatomophysiology of a not-heterosexual subject is different from a heterosexual subject. However, to date, studies have not yet clarified whether it is these differences that cause different sexual orientation or whether orientation (learned through social conditioning or genetic predisposition) shapes the anatomy and physiology of the brain by inducing the changes. It is logical and consequential to think, however, that the first solution is the most acceptable and therefore some anatomical-physiological alterations cause the subject to perceive his orientation as "not-heterosexual". On this hypothesis, still to be verified, the suspicion remains that the decision to "reroute" homosexuality and bisexuality - making them become normal and sexual orientations, such as heterosexuality - can be considered forced (based on more social and political pressures, which are strictly clinical), in the light of the various neurobiological findings that have emerged in research over the past thirty years. Excluding the social and legal implications, thus suspending any moral and ethical judgment on the various positions of sexual orientation, the need to better contextualise the clinical profiles relating to the topic under examination appears interesting [1].

On the subject of the pathologization of sexual orientations other than heterosexuality, between the two theses under discussion (confirmation, on the one hand, or disconfirmation, on the other), this research suggests the "median" position that on the one hand confirms the non-pathological nature of sexual orientations other than heterosexuality per se (since there is no scientific evidence to the contrary), but on the other confirms the hypothesis that, on the basis of the person's experience, psychopathological conditions may coexist that require psychotherapeutic intervention.

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In conclusion, significant data emerges from this research in favour of the psychological aetiological hypothesis (although the writer adheres to the multi-causal hypothesis) according to which in sexual orientations other than heterosexuality there is a marked indexation of psychopathological and dysfunctional traits with respect to the heterosexual group, with the presence of the causal indicators identified in the PSM-1 (sections A, B, C, D) in an increasingly large number in the same non-heterosexual groups. These data would support the hypothesis that non-heterosexual orientations could actually be the adaptive consequence of a psychological trauma, with a strong emotional and sexual impact (including abuse, violence, neurobiological, hormonal, and somatic predispositions, affective-emotional dysregulation with reference figures, and socio-environmental and family readjustments), in itself therefore not pathological but circumstances favoring negative and unfavorable dynamics, of social and environmental matrix, such as to favor or aggravate psychopathological conditions, including mood, depressive, obsessive, somatic, personality and suicidal disorders.

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