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المجلة تتوفر على الموقع الإلكتروني وفي الشبكة العربية للعلوم النفسية فور إعدادها وبالإمكان الحصول على النسخة الإلكترونية من هذين المصدرين.

وأتمنى منكم زملائي تزويدي باقتراحاتكم لتطوير مجلتكم وجعلها أكثر فائدة.

كل الشكر لمن يدعم المجلة ومن يقرأها.

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مايو / أيار 2015

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Religion and Mental Health

M. Fakhr El-Islam

العقيدة والصحة النفسية

محمد فخر الإسلام

Abstract

Most religions have three components: supernatural belief system, a code of worship and a code of conduct. Mental health involves competence in dealing with human environments without impairment of psychological functioning. Soft measures of individuals' religion pay attention to the worship system whereas hard measures look into the employment of the belief system in dealing with everyday stress and alleviating distress as a coping lifestyle. This study is a selective review on the relationship of religion to mental health and mental ill health. The role of religious belief system for self-regulation is more important for maintenance and restoration of mental health than the performance of the system of religious worship.

Key words: religion, mental health

Declaration of interest: None

Introduction

Most religions have three components: a supernatural belief system, a code of worship and a code of conduct. Health may be described as a state of physical, mental and social wellbeing. This definition does not include spiritual wellbeing. Mental health has both negative and positive components. The former refers to the absence of suffering during the performance of mental functions e.g. attention, perception, thinking, memory functions by the individual. The negative component of mental health also includes the refraining from inducing mental suffering into others. The positive component of mental health refers to the presence of psychosocial adaptation, i.e. the fit between an individual's capabilities and the requirements of his human environments including his/her work, family and general environments. The "fit" could be achieved by adapting one's abilities to environmental requirements, i.e. conforming or by adapting the environmental requirements to one's own abilities, in other words, mastery of the environment.[1] The positive component of mental health is sometimes known as competence.

Measures of religiousness

Religion may be measured by soft or hard measures involving respectively ritual performance (code of worship) and faith (cognitive code).[1] Mental health may be measured by soft or hard measures involving respectively overt mental functioning and competence. It is suggested that hard measures of religion may correlate with hard measures of mental health and that soft measures of religion may not have a consistent correlation with either measure of mental health.[2]

In evaluation of religiousness Larson et al. [3] considered 10 domains: affiliation in religious group activity, religious private practice, religious social support, religious coping with stress, religious values, religious commitment relative to other life areas, religious motivation to help reconcile relationships and unique personal religious experience.

Religion is an important constituent in most cultures.

Religion offers belonging to a group, an approved code of attitudes and behavioural norms (code of conduct) and a concept of later after-death life instead of the

intolerable concept of a final irreversible death. Belonging to a religious denomination is socially conditioned by operant conditioning. The latter provides for positive reinforcement of religious belonging by social approval and social support and positive extinction of areligious and antireligious attitudes by social disapproval and even legal disapproval in some communities.

Religion and every day stress

In everyday mental life, religion is used to code rights and wrongs according to a superego formed by internalization of socially shared religious criteria. Religion helps to provide a meaning for stress[4] and its evaluation according to religious cognitive schemas. It instils hope in relief of the ensuing distress and sometimes emphasizes that, it is only the blasphemous who feel hopeless about the future.[5]

It encourages appeal to God by invocation to relieve distress and elicits support of members of the same religion in the face of stress. Religion also sets limits for personal responsibility in generation of stress and attributes failure to do good or failure to avoid wrongdoing to temptation by the devil. It encourages forgiveness of self and others at the expense of revenge. The system of faith beliefs is used for self-regulation and alleviation of distress.

Religious clergy are sometimes mediators between man and God, i.e. in confessions of wrongdoing and repentance.[6] Clergy could also guide believers to stipulations of their religious code of conduct or use religious verses to protect or relieve believers' distress attributed to evil spirits. Some religions allow the distressed themselves to practice self-help (auto-therapy) by invocation of God or by restoring to their code of religious practice or to religious bibliotherapy.[7]

Religion and mental illness

Various studies reported the protective function of religion in reducing the risk of distress following adverse life events, reducing the risk of suicide. Guilt about blasphemous obsessive ruminations is reduced by attributing them to the devil. This helps to "understand" what would otherwise be non-understandable intrusive thoughts.[8] The religious elderly had milder depressions than their non-religious counterpart did. After-care by religious support groups was associated with lower re-hospitalization rates in patients with schizophrenia.[6]

Religion provides an important background against which morbidity of thought content is measured in order to distinguish what is pathological from what is religiously shared in the community. The latter may involve magic thinking about the adversity of envy by others' evil eyes, the adversity of bad omens, or the adversity of black magic/sorcery. When the pathological edge of morbid thought content is lost with treatment, they could be contained in the religiously shared repertoire of beliefs. Thought content suggest mental ill health if they are associated with individual suffering, the induction of suffering in others and/or impairment of individual competence.[9] Azzoni and Raja[10] used these criteria in order to define delusions among pilgrims to the Vatican.

Religious and psychiatric practitioners

Until 1700 AD, British physicians needed a bishop's permission/license to practice. About 1800 AD the situation was reversed: the clergy had to be authorized by doctors to minister in the asylums.[6]

Religious healing practice is prohibited in some Arab countries, permitted in others and ignored in still others.[11] Some religious healers take up healing practice after personal experience of mental distress. Some psychiatrists engage in religious and biomedical treatments at the same time. Investigations into the advantage and disadvantage of religion to health are sometimes considered blasphemous. Religious and psychiatric practitioners are more likely to see patients representing each other's failures than each other's successes.[12]

For psychiatrists to use religious concepts in psychotherapy they need adequate knowledge of their patients' religion or religious sect. Psychiatrists should be able to identify religious "slots" in their patients' personal history or cognitive schemas where religious communication could "take" or fit. Globalized psychiatric medical treatment has also to be culturally adapted in order to suit patients from a variety of cultures. Incayawar et al.[12] have described the unwitting partnership between traditional and psychiatric practitioners.

Religious healers on the other hand, indiscriminately use religious concepts for everybody, on all occasions, and across all sects or degrees of religiousness and regard as blasphemous all discussion on proof of usefulness or appropriateness of their dogmas. Psychiatric practitioners try to undo patients' projection and encourage patients to develop an internal locus of control whereas religious healers reinforce patients' and relatives' projections on an external locus of control by supernatural agents.[12]

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الملخص

لغالبية الأديان ثلاثة مكونات هي مسلمات العقيدة وطقوس العبادة ومسلك المعتنقين للعقيدة. وتشمل الصحة النفسية كفاءة التعامل مع الآخرين بدون معاناة في أداء الوظائف النفسية. وتقاس العقيدة لدى الناس بمقاييس سطحية لقيامهم بطقوس العبادة أو بمقاييس متعمقة في قدرتهم على استخدام إيمانهم في التعامل مع ضغوط الحياة وفى تخفيف كرب المعاناة عند حدوثه. هذه المراجعة نوعية محددة في هذه العلاقة تشير الى الدور الذي تقوم به الأديان والمعالجين الدينيين مقارنة بما يقوم به الطبيب أو المعالج النفسي من أجل استعادة الصحة النفسية بعد الكرب النفسي ويقترح المقال أن استخدام منظومة العقائد الدينية لتنظيم الذات أهم للحفاظ على الصحة النفسية من أداء منظومة العبادات

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Family Violence in the Arab World

Shahe S. Kazarian

العنف الأسري في العالم العربي

شاهي كازاريان

Abstract

Objective: The current review provides up-to-date information on forms, prevalence, causal explanations, treatments, and primary prevention strategies relevant to family violence in the Arab world. **Method:** A literature search of electronic databases including Medline and PSYCInfo using such search terms as 'family violence', 'child abuse and neglect', 'spousal abuse', and 'elder abuse and neglect' in the Arab world, region or countries was conducted. **Result:** Family violence is widespread in the Arab world. Causal explanations of the problem range from the intrapersonal to human rights perspectives. Such explanations invoke the imperatives of culturally informed, evidence-based and multidisciplinary assessments, treatments and community supports. It includes services for victims, perpetrators and witnesses of family violence as well as involvement of criminal justice systems, religious leaders, health and mental health professionals, social agencies, and non-governmental organizations to legislation and public education that is consistent with international conventions, that criminalize family violence, and that nurture egalitarian communities free from gender-grounded discrimination. **Conclusions:** Family violence is widespread in different Arab countries. Arab societies are obligated to help victims of abuse and neglect, hold perpetrators accountable, and realize primary prevention strategies to stop family violence from occurring in the first place.

Key Words: family violence, assessment, treatment, primary prevention, Arab world

Declaration of Interest: None

Family Violence in the Arab World

Family violence (al 'unf al ousary) in the Arab world is a veiled epidemic. The tragic abuse and neglect of children, spouses, and elderly within the domestic tapestry is known to occur in many Arab countries even though violence is antithetical to the Arab ideals of love for and protection of family. Three important factors contribute to the prevailing silence on family violence in the Arab world. Arab culture emphasizes family honor, modesty and solidarity, and as such disclosure of family abuse and neglect to outsiders constitutes family betrayal.[1,2] A second reason for the veiling of the family violence epidemic in the Arab world is its justification on the grounds of civic and/or religious laws such as leniency in prosecuting perpetrators of honor crimes and the divine right husbands believe they have to discipline their brides and off-spring. A third reason for family violence in the Arab world remaining in the closet is that the life of victims outside the abusive relationship may be no better than in the abusive relationship. The harsh social isolation such as being shunned by friends, neighbors and parents and the economic hardship associated with independence force abused women to live as prisoners in their homes and suffer in silence. The unintended consequence of veiling familial abuse and neglect is insulation of the problem from the public eye and compromise to the quality of life of those in the abusive sanctuary.

In the present selective review, family violence terminology in the Arab world, and prevalence, consequences and explanations for family violence are highlighted as are family violence intervention and primary prevention approaches.

Family violence terminology

While Arab scholars, the mass media and non-

governmental agencies tend to use the term domestic violence in reference to family violence, the term domestic violence has a broader meaning than that invoked by the term family violence. First, it encompasses violence perpetrated not only against family members but also non-family members in cohabitation with the family, such as domestic workers. Second, it is inclusive of common-law marriages and non-conjugal cohabitation of heterosexual or same-sex partners or couples.[3] The use of the broader domestic violence term is culturally appropriate and relevant in an Arab world that broadens the meaning of family to include domestic workers and that decriminalizes non-conjugal heterosexual or same-sex relationships and cohabitation.

Forms of family violence

In the Arab world, the family violence landscape includes child abuse and neglect, marital or spousal abuse and neglect, and elder abuse and neglect. Neglect manifests itself in the form of failure to provide a family member with basic needs such as food, clothing, and health care. Child abuse entails physical abuse such as hitting, slapping, or kicking; sexual abuse such as sexual enticement, persuasion, or coercion of a child to engage in non-consensual sexual activity such as fondling, intercourse, exposure to pornographic movies or pictures depicting sexual acts, and prostitution; and emotional or psychological abuse such as engaging in or witnessing threats, put downs, name calling, insults, constant yelling or criticizing.

Particular forms of child abuse in the Arab world as in other parts of the world are child labor, female genital mutilation and cutting, forced marriage, temporary marriage, summer marriage, and honor killing.[4,5,6,7,8] Forced labor entails exploitation and abuse of child laborers as young as five at the expense of their education and livelihood. Female genital mutilation and cutting comprises removal of all or part of the external female genital organs for non-medical reasons. Forced marriage involves use of physical violence, abduction, confinement, emotional abuse, or removal from school to force the non-consenting female child as young as 10 into a marriage usually with an older man for the family's economic advantage. Temporary marriage involves engagement of one's daughter in sexual activity based on a contractual agreement with a 'temporary bride' whereas summer marriage entails availing one's daughter to tourists in return for a bride-price.

Honor killing involves abuse of a female family member who has behaved in ways that are perceived to have brought shame or dishonor to the family to protect or restore the family's honor or reputation. Dishonorable acts include talking to members of the opposite sex, dating, wearing what the family believes are the wrong clothes, and having an unlawful sexual relationship outside marriage (zina). Since a family's honor is linked to a woman's sexual anatomy, the female who has tarnished the honor of the family may be counseled to commit suicide to spare her murder by a relative (father, brother or uncle) or forced to marry her sexual partner who is alleged to have raped her.

Marital or spousal violence involves one of the partners (typically the husband) abusing the other physically, emotionally, and psychologically such as dictating what she can wear, when and where she can go out, who she can spend time with, when she can talk to family members, etc. Spousal abuse also entails financial or economic deprivation and isolation such as withholding or limiting money. A particular form of marital sexual abuse is marital rape (alightisab al zawji), construed in the Arab world as a spousal right rather than a criminal act.[9]

Finally, elder abuse and neglect comprises physical, emotional, sexual and psychological abuse or neglect as well as financial harm or exploitation such as denial of medical care and exertion of undue pressure to sign legal documents related to inheritance or the sale of properties.[10,13]

Prevalence of Family Violence

National prevalence and comprehensive criminal justice

informed reports on family violence are generally absent in the Arab world. Nevertheless, case studies, records from various governmental and non-governmental agencies and surveys on forms of family violence are reported for various Arab countries. For example, child abuse and neglect is documented for different Arab countries including Bahrainis,[14] Egyptians,[15] Jordanians,[16] Kuwaitis,[14,17] Lebanese,[18,19] Palestinians,[20,21] Saudi Arabians,[14,22,23] and Yemenis.[24] In the questionnaire survey in Lebanon, for example, 54.1% of the children admit to experiencing physical abuse such as being hit, kicked, or burned; 16.1% indicate experiencing sexual abuse such as non-consensual hugging and touching; 64.9% report psychological abuse such as being yelled at, embarrassed, and threatened; and, 40.8% indicate witnessing family violence such as hitting and verbal arguments.[18]

Similarly, case studies and surveys document spousal abuse for Egyptians,[25,28] Jordanians,[29,31] Iraqis,[32] Kuwaitis,[33] Lebanese,[34,36] Palestinians,[37,38] Saudi Arabians,[39,40] and Syrians[41] as well as Algerians, Moroccans and Tunisians.[42,43] For example, about 1 in 3 women in Egypt, Jordan, and Tunisia report being beaten at least once by their husbands.[42,44] In Lebanon, 35% of women using primary health care centers indicate the experience of family violence,[34] and 23% of women in primary care centers in Aleppo (Syria) report physical abuse.[41]

Taken together, these and survey studies on elder abuse[45] suggest that family violence in the Arab world is widespread, as is the case in other countries in the word, and that in the majority of cases heads of families such as fathers, mothers and eldest brothers are the perpetrators of family violence.[46]

Consequences of Family Violence

Very few scientific studies in the Arab world are focused on the physical, emotional, psychological, academic, economic and spiritual consequences of family violence. Arab scholars in the field nevertheless recognize the potential negative developmental impact of family violence such as school failure, lower self-esteem, psychological distress in the form of depression and anxiety, impairment in social relationships, suicide, alcohol and drug abuse and increased risk of various gynecological problems and contraction of sexually transmitted diseases such as HIV/AIDS.[17,35,47,48] Similarly, there is recognition on the immediate medical effects of elder abuse such as fractures, dehydration and even death as well as longer-term consequences such as feelings of helplessness, hopelessness, depression, and risk of suicide.[49]

Family Violence: Differing Approaches

Several approaches that explain family violence and offer appropriate interventions and prevention strategies are relevant to the Arab world. These explanatory approaches range from the intrapersonal psychiatric model to the human rights perspective.

Intrapersonal psychiatric approach

The intrapersonal psychiatric approach views family violence as a problem within the individual. It posits that family violence and its intergenerational transmission is rooted in individual biology (genetics, biochemistry and brain structure) and psychopathology or dysfunctional personality make-up shaped by early childhood experiences.[50] In the case of child abuse and neglect, for example, children with physical, mental or behavioral difficulties are more vulnerable to family violence than normal children. In addition, parents with a history of attachment problems, unrealistic expectations of children, and punitive parenting practices are more likely to be child abusers than those with secure attachments and authoritative parenting.[51]

Similarly, the intrapersonal psychiatric approach suggests in the case of spousal abuse that perpetrators are more likely to have experienced or witnessed childhood abuse, to have developed insecure attachments to caregivers, to

have felt conflicted in the domains of power, control, jealousy and emotion regulation such as anger and to have shown poorer mental health in the form of such psychiatric disorders as posttraumatic stress disorder (PTSD), personality disorders, and substance use disorders.[50,52,54]

The intrapersonal psychiatric approach advances culturally relevant and evidence-based psychiatric and psychological assessment and treatments for recipients, perpetrators and witnesses of family violence.[55,56]

Family approach

The family approach views family violence as a problem within the family rather than the individual. It posits that family violence is rooted in family conflict or dysfunction such as role confusion, poor communication, and deficits in problem solving skills.[50,57,58] The family perspective advances culturally informed and family-focused interventions to help dysfunctional families troubled by marital conflict and interpersonal violence to deal with the violence venom within the family and nurture marital harmony and good quality parenting.[59]

Sociocultural approach

The sociocultural approach views family violence as a problem that transcends the intrapersonal and the boundaries of the family. It posits that the patriarchal social structure that invokes loyalty to family and tribe, informs rigid gender roles and sanctions male dominance and control over children and women is causative of family violence.[43,60,61] The worldviews of patriarchal Arab societies are preoccupied with the importance of shame, honor, and women's chastity; tolerate, encourage and glorify violence; invoke a parenting style that is rigid, authoritarian, and focused on overprotection and control rather than nurturance and independence; and licenses heads of families such as fathers, elder sons and uncles to the corrective and disciplinary functions of corporal punishment within the family space. For example, husbands may believe in entitlement in disciplining their wives for not having food ready on time, going out without their permission, or refusing to have sex with them so much so that women feel truly prisoners in their homes.[62,63] Similarly, the beliefs of fathers committed to harsh discipline may be inclusive of honor killing.[64] Finally, children and women deeply inculcated in the culture of corporal punishment may not even recognize behaviors that constitute abuse and neglect simply because they may consider them normative or condoned in their vertically collectivist society.[65]

The sociocultural approach advocates social reform of patriarchal societies and advances psychoeducational interventions to nurture a family space that is egalitarian and peaceful rather than preoccupied with power, control and punitive discipline.[66]

Religious approach

The religious approach views family violence as a problem that transcends culture. It posits that decontextualization, misinterpretation, and manipulative use of Ḥadīth and Qur'ānic verses are the root cause of the social poison of violence within the family boundaries.[42,67,69] For example, men commit violent disciplinary beatings of their wives and children in the name of Islamic teachings and refuse accountability for their actions. Similarly, the Qur'ānic view of patience (sabr) can be misused by parents who encourage their daughters to endure an abusive relationship when in reality sabr from the religious perspective is construed a virtue that motivates women in abusive relationships to seek help and explore options rather than endurance of the physical and psychological wounds of a battered wife. The religious perspective to family violence also contends that differing approaches to Islamic Law (shari'a) implementation, such is the case in Morocco and Saudi Arabia, and religious leaders' attitudes to legislation that criminalizes family violence determines each Arab country's response to the problem of family violence.[67]

The religious approach to family violence aims to liberate the family from abuse and neglect by reconciling cultural and religious norms that are antagonistic to nurturing peace and harmony within the family sanctuary.[42,67,70]

Human rights approach

The human rights approach views family violence as an international human rights problem. It posits that family violence is due to the failure of the State to protect the family from violation of the fundamental rights of its members to physical integrity, liberty, security, dignity, gender equality, education, equal protection of the law, consensual marriage, social security, and standard of living adequate for health and well-being; as well as such freedoms as freedom of thought, conscience and religion as well as freedom from slavery or servitude, torture or cruel, inhuman or degrading treatment or punishment, and discrimination.[68,71,74] For example, in societies where child labor is the norm there is neglect in the recognition that education is a fundamental human right and that legislation is required to enforce laws that protect children against exploitation and abuse and to institutionalize as the birthright of every child to a developmental life of dignity.

The human rights approach considers the Universal Declaration of Human Rights[71] as a recognized customary law that is binding on every country in the world. The Declaration[71] along with conventions[75,76] mandates all countries of the world protection of the family and prohibition of invoking any custom, tradition or religious consideration to avoid their obligation to eliminate family violence. Nevertheless, it recognizes that citizen enjoyment of human rights and freedoms varies across Arab countries, as do women's constitutional rights to equality with men.

The human rights approach aims at constitutional reform that is informed by the universal declaration of human rights and freedoms for the purposes of rethinking loyalty to family and tribe vis-à-vis loyalty to the State, abolishing gender-based discrimination, and instituting criminalization of family violence so that the protective nutrients of equality and dignity permeate society.[77,78]

Cultural and Social Norms that Support Violence in Arab Families

While no single approach explains the ultimate cause of family violence and while multiple viral factors are likely implicated in the cause of family violence, two culturally and legally sanctioned promoters of potential or actual violence in the Arab world are the custodial role assigned to males (fathers, husbands, and brothers) vis-à-vis children wives and sisters, and the use of physical punishment as the primary mode of socialization of Arab children and women. In Arab societies, men are socialized early on to a masculine role of 'master of the family' that is informed by power, privilege, entitlement and superiority as well as control over the behavior and sexuality of children, wives and sisters to sustain unquestioning submission (ta'a) and maintain the family's stability, honor and reputation.[29,42,62] Similarly, physical punishment in the Arab world is the dominant disciplinary approach to moralize and rectify the behavior of children and wives (such as forcing the children to carry out religious duties in the form of prayers or forcing wives to have no relationships to any male other than the husband) and the culturally held right of the male masters of the family.[29] The consequence of physical punishment as a primary instrument for socialization is that children, wives and sisters learn to control and normalize their own behaviors not by internalization of cultural values and norms or development of self-control but rather by external locus of control, that is, expectation or fear of physical punishment. The underlying assumption in the use of physical punishment as a fundamental approach to socialization of Arab children and women is the culturally held belief in Arab societies that children and women are deficient in self-control or internal locus of control and as such are in need of male custodians as external agents of control in order for them to adopt social norms of behavior. For example, women may be prohibited from driving cars because their sexual behavior towards males will invoke a socially inappropriate approach to males.

Even though the socialization of Arab men as earthly lords or masters of the family and use of physical punishment as a primary vehicle to moralize and rectify the behavior of

children and wives support family violence in the Arab world, it is important to recognize that not all Arab men abuse their children or beat their wives. In addition to continued research on the characteristics of men who abuse their children and assault their women, it would be instructive to also study Arab men for whom the normal behavioral pattern is a family space of peace, mutual love, rights, respect, and happiness.

Family violence and risk factors

There is a paucity of empirical studies in the Arab world that identify sociodemographic risk factors in relation to family violence. Available studies are more focused on wife abuse rather than child abuse or elderly abuse. Risk factors for child sexual abuse include family fragmentation, living space (two rooms or less or six or more rooms), child or mother working, and high or low educational level of mother.[18] Similarly, consistently reported increased risk for wife abuse include the abused woman having lower education, being in a low socioeconomic class, marrying and starting motherhood at an earlier age, being married to a less educated husband, and having a considerable age gap between her and her spouse.[27,29,40,41]

Treatment of Family Violence

There is a paucity of research on help-seeking patterns and treatments for family violence in the Arab world.[79] Intrapersonal factors that act as barriers to seeking help and treatment include denial of the problem, taboos associated with mental health, the shame of abuse, self-blame, valuing the family's privacy, fear of retaliation, emotion-focused coping such as sabr or reliance on religious faith and destiny, lack of knowledge about human rights, and economic dependence on the abuser.[67,69,80] Familial factors that act as barriers to seeking help and treatment include significant others such as parents abusing the abused by invalidating victim complaints of abuse or counseling victims to endure the abuse and the neglect. Finally, sociocultural factors that inhibit help-seeking behavior include lack of adequate response from law enforcement officers, religious leaders, and primary care professionals as well as inadequacies in the availability, accessibility, affordability and coordination of culturally relevant and competent treatment and community supports.[67,69,81,83]

Comprehensive culturally informed and evidence-based assessments, treatments and community supports and services for victims, perpetrators, and witnesses of family violence are varied in the Arab world, as are the training of professionals such as physicians, psychiatrists, psychologists and social workers in routine inquiry for detection of family violence and safety management[59] and identification of and referral to community supports and services.[84,86] Women leaving an abusive situation with children may require emergency transportation to residential services that provide safe and secure accommodation, food, clothing, health services, and counseling in the legal, social services, family mediation, educational, employment, and psychological, psychiatric, religious, and recreational domains. In addition, perpetrator involvement in treatment may be psychoeducational in orientation to address power and control issues and egalitarian and nonviolent familial relations and/or cognitive behaviorally focused to examine cognitive and behavioral distortions and to teach such skills as communication, assertiveness and anger management.[56, 66]

Primary Prevention of Family Violence

While comprehensive empirically-derived treatment and community support services are necessary to care for individuals and families plagued with family violence and to prevent further harm and psychological wounds from recurring or lingering, the widespread existence of family violence in the Arab world, it's devastating consequences, and the prevailing attitude that it is a private family affair invoke the need for proactive primary prevention strategies to prevent family violence from occurring in the first place.[50,87] In addition to collective efforts to eradicate the social ills of poverty, unemployment and illiteracy, a two-

pronged approach to primary prevention that targets the elimination of family violence is required. The first silo of the family violence focused primary prevention ideal is implementation of civil and religious laws that mandate State protection of the family in accordance with international conventions, that criminalize family violence, that ban corporal punishment, that elevate women to a status of citizenship equal to their male counterparts, and that eliminate gender-based discrimination. The second silo of the family violence focused primary prevention ideal is public education. Civic and religious leaders, scholars and professionals in the field of family violence as well as leaders in the health and criminal justice sectors in collaboration with non-governmental agencies need to introduce nation-wide culturally relevant and effective community education and awareness campaigns that recognize the equality of the sexes and the criminality of family violence, that help break the silence on family violence, and that nurture an attitude of non-violence in the institutional lives of infants and preschool-age children, school-age children, adolescents, college youth, adults, and the elderly.[50, 87,90] One of the central messages that the primary prevention public campaign can convey is that a violent family is a burden on society, a peaceful family an asset.

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ملخص

الأهداف: التزويد بمعلومات قائمة عن أشكال، انتشار، مسببات، علاجات، واستراتيجيات الوقاية الأولية بما يخص العنف الأسري في العالم العربي. **المنهج:** لهذه المراجعة، تم التفتيش في الأبحاث الموجودة على قاعدات البيانات الإلكترونية من ضمنها Medline وPSYCInfo، باستعمال مصطلحات بحثية مثل " العنف الأسري"، " إيذاء الطفل وإهماله"، " الإيذاء الزوجي"، " إيذاء المسن وإهماله" في العالم العربي، المناطق أو الدول العربية. النتائج: العنف الأسري منتشر في العالم العربي. التفسيرات السببية لهذه المشكلة تتراوح ما بين منظور يردّها لأمور متعلقة بداخل الإنسان، وآخر إلى حقوق الإنسان. وهي تستدعي حتميّة ان يكون هناك تقييم، علاجات، دعم وخدمات مجتمعية لضحايا العنف الأسري ومرتكبيه والشاهدين عليه، على أن تكون على علم بطبيعة المجتمع العربي، قائمة على أدلة ومستمدة من عدة تخصصات. كما تستدعي حتمية تدخل أجهزة العدالة الجنائية، زعماء الدين، اختصاصي صحة وصحة النفسية، هيئات إجتماعية، ومنظمات غير حكومية من أجل التشريع والتثقيف العام بشكل يتناسق مع المواثيق الدولية التي تُجرّم العنف الأسري والتي ترعى مجتمعات تقوم فيها المساواة وخالية من التمييز على أساس الجنس. **الخاتمة:** العنف الأسري منتشر في دول عربية مختلفة. المجتمعات العربية مُلزَمة بمساعدة ضحايا الإيذاء والإهمال وبمحاسبة مرتكبيه وبتنفيذ استراتيجيات وقاية أولية لإيقاف العنف الأسري من أن يحصل أصلا.

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The Early Warning Signs of Autism Spectrum Disorder among Saudi Children

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الظواهر للإنذار المبكر باحتمالية الإصابة باضطراب طيف التوحد لدى الأطفال السعوديين

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Abstract

Background: Identifying Autism Spectrum Disorder (ASD) as early as possible is the most important step to be achieved due to the fact that early intervention can result in significant improvement of ASD symptoms. It is proved that the impairments identified in children with ASD are in skills that normally develop between the first 12 to18 months of life. **Aim:** To determine the early warning signs for participants with ASD in the north of Riyadh. **Method:** A retrospective case control study, 57 subjects with ASD typical symptoms were selected by a convenience sampling method at King Khalid University Hospital and compared with a randomly selected, community based control group (N=84) matched for age and gender. Written informed consent was obtained from all parents/caregivers who completed questionnaires and were also interviewed. **Results:** Our findings suggest that loss of shared enjoyment with family members, absence of early speech symbols, e.g. stringing sounds together, loss of eye to eye contact between the child and others and lack of imaginative play are early warning signs of ASD by the age 12 to 18 months in Saudi subjects with ASD.

Key Words: Autism Spectrum Disorder, ASD, warning signs, Saudi Arabia.

Declaration of interest: None.

Introduction

Autism Spectrum Disorder (ASD) is defined as a group of neurodevelopmental disorders characterized by impairments in communication, social interaction, repetitive behaviors, abnormal movement patterns and sensory dysfunction.[1] According to the Diagnostic and Statistical Manual of Mental Disorders, Fourth Edition (DSM-IV), children with autism were classified as either having autistic disorder, Asperger's disorder, childhood disintegrative disorder or pervasive developmental disorder not otherwise specified. However, DSM-V has put all the four disorders under one umbrella.

The prevalence of autism has increased dramatically over the past two decades; however, the reason for this is still unclear. A 2012 review of global prevalence estimates of ASD found a median of 62 cases per 10,000 people although there is limited evidence from low-and middle-income countries. It affects 86-91 per 10,000 children in the United States of America (USA)[3, 4] while a higher rate of 157 out of 10,000 has been reported in United Kingdom (UK).[5] New research from the Centers for Disease Control and Prevention suggested ASD prevalence rates in the USA have increased to 11.3 in 1,000.[33]

In Arab countries, the prevalence of ASD ranges from 1.4 cases per 10,000 children to 29 per 10,000 children in Oman and United Arab Emirates, respectively. It is estimated that the prevalence of autism in Saudi Arabia is 18 per 10,000, which is slightly higher than the 13 per 10,000 reported in developed countries.[6] Traditionally, ASD is not diagnosed until the age of 36 months; however, a recent study has shown that diagnosis can be established at earlier age. Identifying ASD as early as possible is the most important step to be achieved because early intervention can result in significant improvement of symptoms. An ASD diagnosis in the USA is not established until the age of three to four

years.[7] There is strong evidence to suggest that early intervention, mainly before the age of three and a half, is more effective than after the age of five.[8,9] Another study suggests that intervention starting even before age of three years will result in a better outcome for the child.[10] It has been stated that the chance to start treatment for ASD specifically around the child's first birthday, which is the age of altering brain growth, seems to have the ability to change outcomes for affected children, although this has not been achieved yet. These findings emphasize the urgent need for early diagnosis of ASD so the early intervention will lead to a significant outcome. Diagnosis of ASD in many Arab countries is not often made until later in the child's life, particularly where the disorder has a mild or moderate course.[11] Failure or delay in diagnosing has led to excess impairments, which had a hugely negative impact on the children and their families.[11] Many studies found that highly effective interventions involve behavioural modification.[34]

Most research on the possible early warning signs that can be detected in the first two years of life in children with autism revealed many positive signs.[12,13] One study on social communication among a sample of preschool children with ASD showed important implications for earlier diagnosis. It was proved that the impairments identified in children with autism are in skills that normally develop between the first 12 to18 months of life.[12,13] These results suggest there is a group of pre-linguistic behaviors that appear to be important early indicators of ASD. Studies from the Middle East on this topic have been particularly rare. Numerous studies have documented that delayed attainment of social skill milestones, including joint attention, social orienting and pretend playing are important early warning signs of ASD.[14,15] Parents' perception and understanding of ASD is extremely important in early diagnosis of the disorder. In addition, parents are considered an important a part of any treatment plan because they can monitor their children's behaviour. However, many factors can influence a parent's perception, such as depression. As a result, understanding of the contextual influences on parent perceptions is important for making clinical decisions regarding a child's treatment.[35]

The main objective of the current study is to determine the early warning signs of ASD as perceived by parents of children with autism attending special private schools and as part of the Autism Research and Treatment Centre at the King Khalid University Hospital in Riyadh between December 2012 to March 2013 as a way to help with early diagnosis.

Methodology

Participants

A total of 141 subjects were recruited to the current study and separated into two groups: 57 were known ASD cases according to the DSM-IV-TR criteria and were selected, using convenience sampling method (N=57; 49 boys and 7 girls) with Mean age= 9 years (SD=5). A healthy control group was randomly selected during well-baby check-ups in a primary baby healthcare clinic and matched with cases by gender, age, race, and socioeconomic status (N=84; 43 boys and 38 girls) with Mean age= 5 years (SD=4). Cases to control ratio was 1:1.5. Estimated numbers of subjects and cases were calculated by the sample size calculator provided by the Macorr website at a confidence level of 95% and a population size of 4.6 million (based on data published on the Riyadh Development Authority official website on 24th of September 2012). Sample selection occurred from the period between January 2013 and March 2013.

The inclusion criterion for the group with autism was meeting the cut-off score for ASD based on the DSM-IV criteria. While the exclusion criteria for both cases and controls were:

a. Dysmorphic features, Fragile X syndrome, any serious neurological diseases, (e.g. seizures, psychiatric disorders (e.g. bipolar disorder), or neurodevelopmental disorders and disabilities (e.g. AHDH).
b. Known endocrine, cardiovascular, pulmonary, liver or kidney diseases.

c. Children above the age of 12 years were also excluded due to the possible difficulty in recalling the information from the caregiver.

After recruiting the sample, all caregivers of the 141 subjects, mainly mothers, were informed about the research procedures and consented to participate voluntarily in the study. All were aware that there would be no penalty or loss of benefits should they wish not to participate. After consenting, all caregivers were asked to recall information about the child through an interview-based questionnaire.

Measures

The current study was conducted by interviewing the parents/caregivers of children diagnosed with autism and completing a questionnaire. Participant recruitment was from the following centres: The Autism Research and Treatment (ART) Centre of King Saud University, Al-Amodi Autism Research Chair at King Khalid University Hospital (KKUH), Azam Autism Centre in Riyadh, the Autism families' Association Centre, and children without autism from the well-baby clinic in King Khalid University Hospital. The questionnaire was designed according to what was observed from the previous literature to be important. It consisted of two parts with 24 questions in each. The first part included questions about the general health status of parents, labour, delivery and breast-feeding of the child, and family socioeconomic and education status. The second part of the questionnaire included items about the child's behaviour in his/her first 18 months of life as perceived by the parents or caregivers. In addition, these items were taken from the CSBS DP Infant-Toddler Checklist[16] to identify different aspects of development in infants and toddlers. These items were translated into Arabic and modified according to the culture in Saudi Arabia. This part consisted of seven categories: emotion and eye gaze, communication, gesture, sounds, words, understandings and object use. Furthermore, participants were given a complete description of the study and written informed consent was obtained from all parents/caregivers before enrolment in the study.

Study setting

Riyadh is the capital city of the Kingdom of Saudi Arabia. Riyadh has an estimated population of 4.6 million, including Saudi and non-Saudi populations. The non-Saudi population was estimated by the High Commission for the Development of Riyadh to be around 1.7 million. The rest of the population is comprised of Saudi citizens.[17]

Control subjects for the current study were recruited from the Well Baby Clinic at King Khalid University Hospital. Subjects with autism were recruited from the Autism Research and Treatment Centre (ART) and Al-Amodi Autism Research Chair, Azam Autism Centre and Autism Families Association. All were located in Riyadh.

Both the Autism Research and Treatment Centre and Al-Amodi Autism Research Chair are part of King Khalid University Hospital. King Khalid University Hospital is an 800-bed tertiary hospital located largely in the northern area of Riyadh. It has a special outpatient building, over 20 operating rooms and fully equipped and staffed laboratory, radiology and pharmacy services. The facility provides a primary and secondary care services to all people who live in the northern area of Riyadh. In addition, it provides tertiary care services to all referred patient. The care service that is provided includes all types of investigation and medication is free of charge.[18]

Furthermore, Azam Autism Centre is a special education centre in the northern part of Riyadh, which has capacity to support 60 children with autism and includes a specialist teacher for each child. In addition, the Autism Families Association is a community society that aims to raise awareness about ASD through weekly lectures from a variety of relevant specialists.

Statistical analysis

Data were entered analysed using the Statistical Package for the Social Sciences, Version 16.0 (SPSS 16.0). Chi-square test and t-test were used to determine any baseline difference in behaviour between individuals with and without autism. The data were presented as means ± standard deviation, frequency, median, maximum, minimum and percentage.

Statistical differences were ascertained using the chi-square with significance set at a P value of 0.05 or lower.

Ethical consideration

Oral assent was obtained from each participant and Parents/caregivers asked to sign a consent form which outlined the sponsor, study plan, and benefits of the research. In addition, it was clarified that all the information provided would be kept confidential and the identity would never revealed. Furthermore, it was mentioned that if an individual refuses to participate in this study, there would be no retribution or loss of benefits.

Results

A total of 141 children, (n= 57 cases, n= 84 controls) were analysed from which n= 56 subjects with ASD were recruited to the study, (49 boys and 7 girls), with mean age 9.8±4.1 (mean ±SD). The mean age of diagnosis was 2.27±1.37 (mean ±SD). The gender ratio (male: female) for all time periods was 7:1, ($p<0.001$)

Table 1: Comparison between boys and girls according to age at point of ASD diagnosis

Age (y)	Boys	Girls
1.0 – 1.9	2	1
2.0 – 2.9	4	4
3.0 – 4.0	30	1
>4.0	10	0
Total	46*	6

Table 2 presents a comparison between history of pregnancy and delivery for the group with autism and for the control group; 42 mothers with children who have autism had a vaginal delivery compared to 53 in the control group, which was not statistically significant ($p=0.36$). In addition, 80.7% of mothers with ASD diagnosed children did not have any medical complication during pregnancy compared with control group (78.6%).

Table 2: Comparison between mothers of participants and mothers of control group during pregnancy and delivery

Characteristics	ASD group (n=57)	Control group (n=84)	P value
The method of childbirth			**0.35**
Vaginal delivery	42 (75%)	53 (63.9%)	
Caesarean section	12 (21.4%)	27 (32.5%)	
Assisted delivery (forceps, aspirator, induced)	2 (3.57%)	3 (3.6%)	
Total	56	83**	
Full-term pregnancy			**0.092**
Yes	56 (98.2%)	76 (91.6%)	
No	1 (1.75%)	7 (8.4%)	
Total	57	83 ***	
Complication during that pregnancy			**0.74**
No	46 (80.7%)	66 (78.7%)	

Yes	11 (19.3%)	18 (21.3%)	
Total	57	84	

Mother's mean age for group with autism (29 ± 5.7 y) compared to controls (31 ± 7.6 y) (statistically not significant, p = 0.122). Father's mean age in autistic group (34 ± 9 y) was not statistically significant compared to controls (37 ± 8.4, p = .11).

(*) Five missing data.

(**) One missing data.

(***) One missing data.

The socio-demographic characteristics of participants are listed in Table 3. There were no significant differences in the monthly income between the two groups. Moreover, the educational levels for parents demonstrated no statistical differences between the two groups.

Table 3: Socio-demographic characteristics of participants

Characteristics	Cases (n= 57)		Controls (n= 84)	P value
Age of mother (y)				0.122
20 – 29	19 (34.5%)		37 (45%)	
30 - 39	28 (50%)		30 (36.5%)	
40 – 49	3 (5.4%)		9 (11%	
Total	50(*1)		76(*2)	
Age of father (y)				0.11
20 -39	41 (74.5%)		48 (60%)	
40 – 59	14 (25.5%)		31 (40%)	
Total	55(*3)		79(*4)	
Education level of mother				
Secondary school	21		19	
High education	26		50	
Total	47(*5)		69(*6)	
Education level of father				
Secondary school	15		14	
High education	29		48	
Total	44(*7)		62(*8)	
Family monthly income (Saudi riyals)				0.55
<5000	3 (5.4%)		10 (12.3%)	
5000-15000	30 (54%)		38 (47%)	
15000-30000	14 (25%)		20 (24.6%)	
>30000	8 (14.5%)		13 (16%)	
Total	55(*9)		81(*10)	
Mother's emotional status during pregnancy				0.903
Same	33(63%)		52(65%)	
Better	7 (13.4%)		12 (15%)	
Worse	12 (23%)		16 (20%)	
Total	**52(*11)**		**80(*12)**	

(*1) Seven missing data. - (*2) Eight missing data. - (*3) Two missing data. - (*4) Five missing data. - (*5) 10 missing data. - (*6) 15 missing data. - (*7) 13 missing data.- (*8) 22 missing data (*9) 2 missing data. - (*10) 3 missing data. - (*11) 5 missing data. - (*12) 4 missing data.

Overall, 33 out of 52 (63%) mothers of children with autism indicated there was no difference in the level of their antenatal emotional condition when compared with other pregnancies. Seven (13.4%) mothers estimated that the antenatal emotional condition of their diagnosed child was better when compared to their other pregnancies; however, 12 (23%) reported that it was worse. Of the 84 mothers of children without autism 52(65%) estimated that there was no difference in the level of antenatal emotional condition during their

pregnancies while 12 (15%) mothers estimated that they were better and 16 (20%) mothers have reported that it was worse. Despite this, there was no significant difference in the level of antenatal emotional condition between mothers of participants in either group (p-value 0.903).

Furthermore, 33 (57.8%) participants with autism received both breast and bottle-feeding during the first two years of life. Whereas, 14 (24.5%) participants with autism received only breast feeding and 10 (17.5%) were bottle fed. Similarly, 54 (64.2%) out of 84 control subjects received both breast and bottle-feeding during the first two years of life and 15(17.8%) received only breast feeding and 15(17.8%) received only bottle-feeding. The proportion of participants with autism (24.5%) who only breast-fed was slightly higher than the subjects in the control (17.8%) group. The difference was not statistically significant (p-value .616).

Table 4: Feeding pattern

Feeding pattern	Cases (n=57)	Controls (n=84)	P value
Breast-feeding pattern			0.616
Breast feeding	14 (24.5%)	15 (17.8%)	
Bottle feeding	10 (17.5%)	15 (17.8%)	
Both	33(57.8%)	54 (64.2%)	
Total	57	84	
Time bottle feeding was introduced (mo)			0.939
<1	9 (33.3%)	18(36.7%)	
1-6	15(55.5%)	26 (53%)	
7 – 12	2(7.4%)	2 (4%)	
>12	1(3.7%)	3 (6%)	
Total	27	49	
Reason for bottle feeding			0.293
Child refusal	12 (30%)	9 (22.5%)	
Mother's personal desire	7 (18%)	12 (30%)	
Mother's health status	4 (10%)	7 (17.5%)	
Other	6 (15.3%)	12 (30%)	
Total	**29**	**40**	

The reasons behind suboptimal breast-feeding were investigated in both groups. Among participants with autism, 13 (45%) of mothers reported their child refusing to be breast fed while 7 (24%) indicated it was the mother's personal desire and 4 (13.7%) indicated mother's health condition with the rest 5 (17%) identifying other reasons. By contrast, among control subjects, 9 (22.5%) mothers gave child refusal as the reason for not breast feeding while 12 (30%) indicated it was the mother's personal desire and 7 (17.5%) related the choice to mother's health condition with the rest 12 (30%) citing other reasons. Suboptimal breast-feeding due to child refusal was two times higher among participants with autism (45%) than control subjects (22.5%). However, this difference was not statistically significant (p-value 0.307).

Emotion and eye gaze

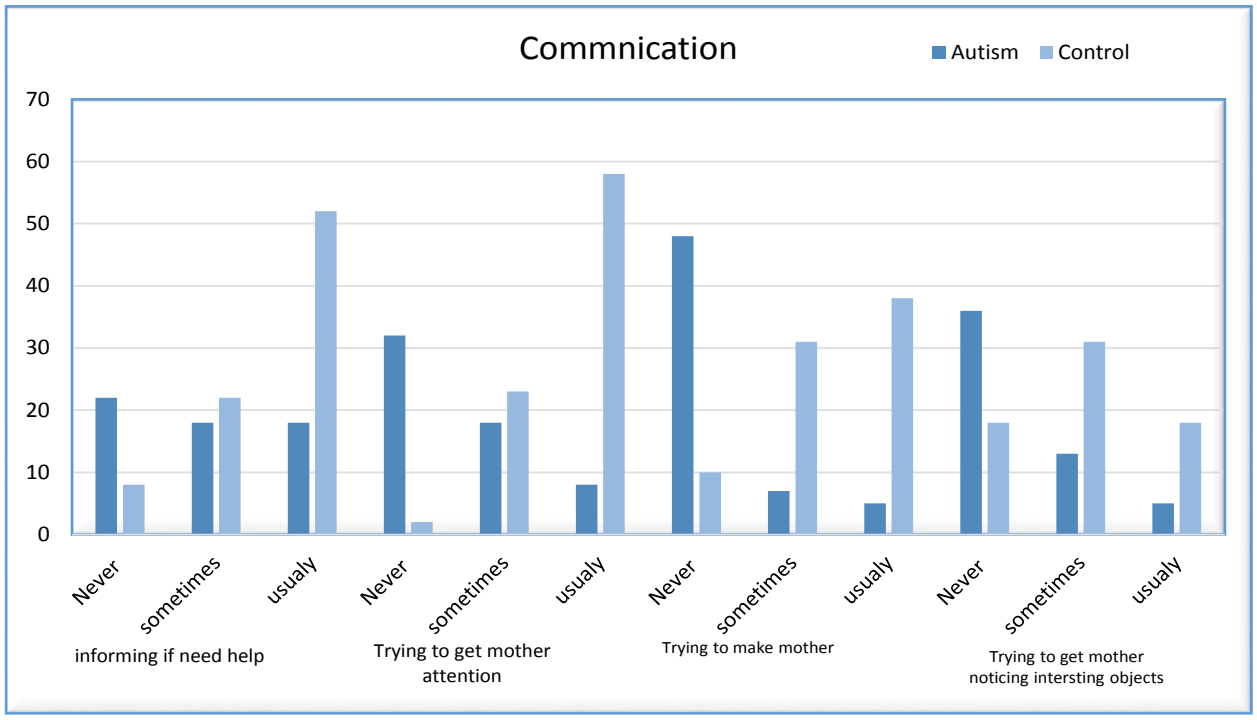
In terms of emotion and level of eye contact, 40 out of 57 (70%) mothers with children who had autism were able to detect if their babies were happy or upset by their eye gaze in their first 18 months of age, while 82% of controls were able to detect if their babies were happy or upset by their eye gaze in their first 18 months of age (highly statistically significant, $p< 0.001$).

Furthermore, 57.8% (33 out of 57 subjects) of participants with autism and 8.3% in the control group (7 out of 84 control subjects) exhibited a lack of eye contact as perceived by their mothers and caregivers (highly statistically significant, $p< 0.001$). Forty five percent of participants with autism and 3% of controls had never simultaneously smiled whilst making eye contact with their parents or caregiver (highly

statistically significant, p<0.001). Furthermore, 12 out of 57 (21%) participants with autism and 69 out of 84 control subjects (82.1%), had usually, simultaneously smiled whilst making eye contact with their parents or caregiver (highly statistically significant, p< 0.001).

Thirty five out 57 (61.4%) participants with autism and 5 subjects out of 84 (10.4%) had never gazed toward anything that had been pointed out to them by their parents or caregivers (highly statistically significant, p<0.001). In addition, 14.2% of participants with autism and 65.4% of the control group routinely gazed at things that were pointed out to them by their parents or caregivers (highly statistically significant, p< 0.001).

Figure 1. Demonstrate communication



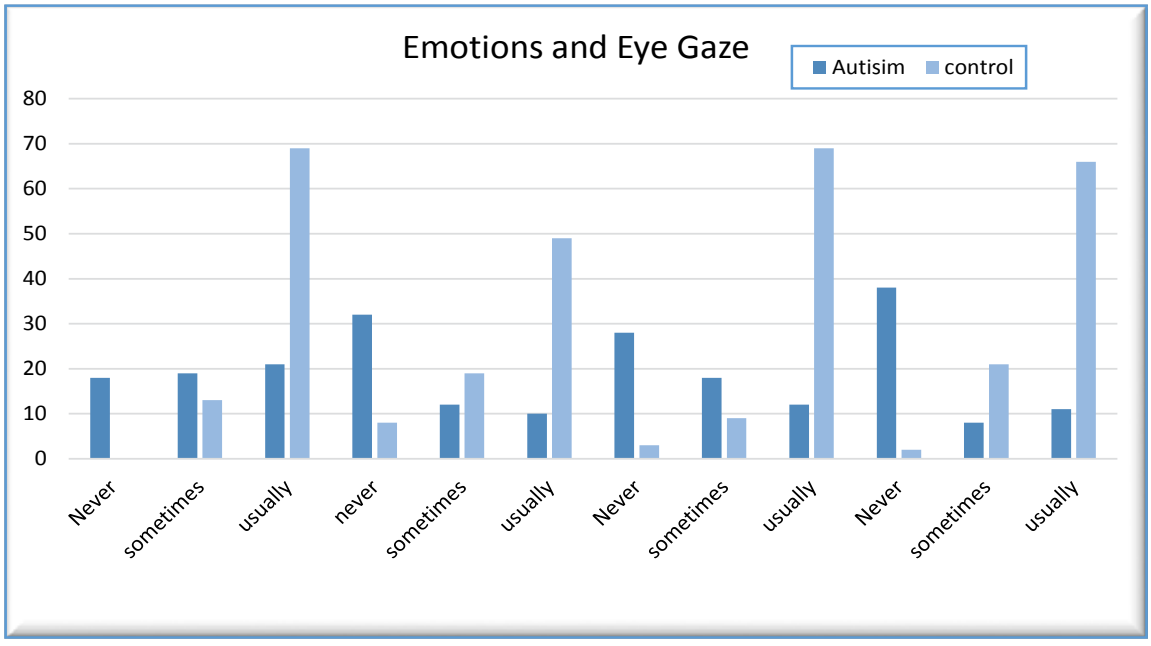
Communication

There were 22 (38.5%) and 6 (7.1%) of participants with autism and control subjects who never tried to inform their mother or caregivers when they needed any help. In addition, 16 (28%) of participants with autism and 23 (27.3%) of control subjects answered with sometimes. Furthermore, 16 (28.1%) of participants with autism and 53 (63%) of control subjects answered with most of the time. For the remaining three participants with autism and two control subjects, their mothers or caregivers couldn't remember if their children were able to express whether or not they required help (highly statically significant, p< 0.001). Thirty two participants with autism (56.1%) and two (2.3%) from the control group could did not attempt to re-engage the attention of their parents or caretakers when they were not paying attention (highly statistically significant, p < 0.001). In addition, 16 (28%) and 8 (14%) of participants with autism, responding sometime and most of the time respectively, did not attempt to regain the attention of their parents or caretakers when they were not paying attention. However, 24 (28%) and 57 (67.8%) control subjects did not attempt to regain the attention of their parents or caretakers when they were not paying attention (high statically significant, p<0.001).

Nine (7%) of the participants with autism and 67 out of 84 (80%) of the control subjects were interested in doing things to make their parents and caretakers laugh most

of the time (highly statistically significant, p< 0.001). Conversely, 43 out 57 (75.4%) participants with autism and 10 out of 84 (12%) from the control group were never interested in making their families laugh as perceived by their parents and caregivers (highly statistically significant, p< 0.001). Moreover, about 59.6% of participants with autism (34 out of 57) and 20.2% of control subjects (17 out of 84) never showed interest or attempted to get their parents to notice interesting objects (highly statistically significant, p< 0.001). Whereas, 21% of participants with autism (12 out of 57) and 36.9% of control subjects (31 out of 84) were sometimes showing such interest. Similarly, 8.77% of participants with autism (5 out of 57) and 21.4% of control subjects (18 out of 84) have shown positive interest and attempted to get their parents to notice interesting objects most of the time. These data are statically significant (p<0.001).

Figure 2. Demonstrate emotions and eye gaze



Gesture

Thirty one out of 54 (54.38%) participants with autism and three children in the control group (3.57%) never took things and gave them to their mother, e.g. toy, bag, glasses, mobile phone, (highly statistically significant, p <0.001).

Moreover, on questioning as to whether the child was showing things to his/her mother in order to see them rather than take them 41 (71.9%) participants with autism had never done this compared with only 14 controls (16.6%). On the other hand, only 7 (12.28%) participants with autism were reported as doing this often compared with the majority of the control group (32 participants; 38.09%, which was highly statistically significant, p-value <0.001.

Furthermore, the large bulk of the group with autism (33 participants; 57.89%) never waved their hands in order to welcome or bid farewell to other people compared with 4 children in the control group (4.76%).

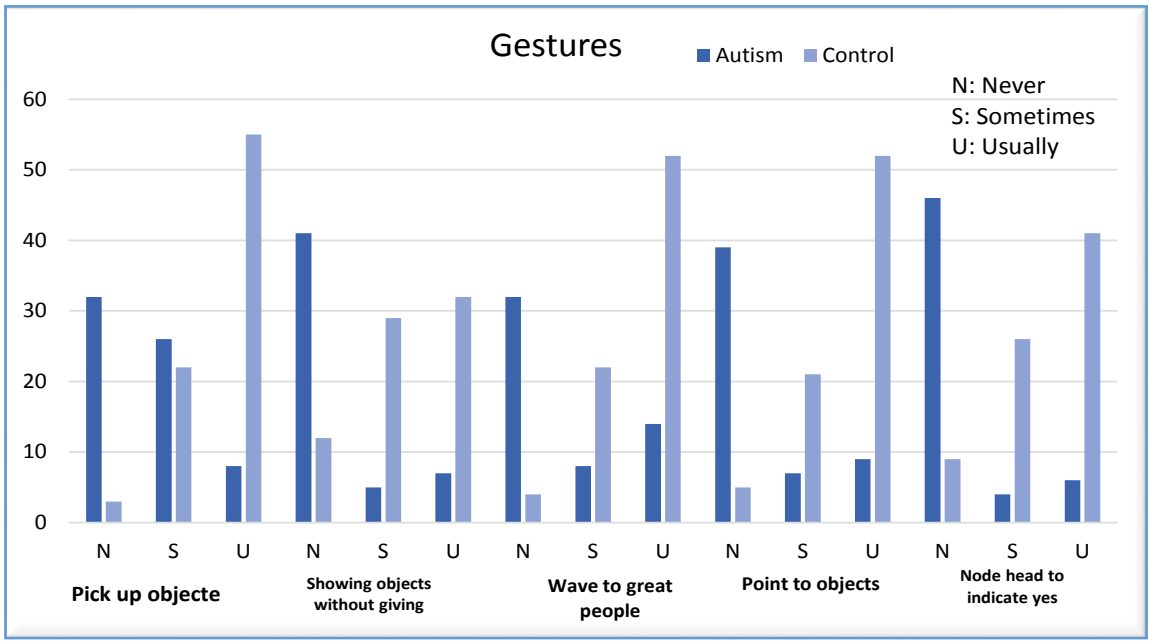
In comparison, only 14 (24.56%) participants with autism have been reported doing this often in contrast to the majority of the control subjects 55 children (65.5%), which was highly statistically significant, p-value <0.001).

Moreover, on asking about whether the child was pointing to things around him/her by his/her hands, e.g. if the bell rings he/she pointed to the door to let his/her parents know), 39 (68.42%) participants with autism and 4 (4.76%) controls were reported as never

having done this. Whereas, there were 9 (15.78%) participants with autism against 52 (61.90%) normal participants who were reported as they often used to do such thing, which was highly statistically significant, p-value <0.001).

In addition, on reporting whether the children were shaking their head to show their acceptance to something, a sum of 45 (78.95%) of participants with autism had never done this. In contrast, in the control subjects there are only 9 children (10.71%) who never did such thing. Whereas, there are only 7 autistic children were often doing this (12.28%) compared to 41 normal children (48.81%), which was highly statistically significant, p-value <0.001).

Figure 3. Demonstrate gesture



Sounds and words

Furthermore, among 57 participants with autism, there were 29 (50%) who were unable to use any sounds or words in order to get attention and help compared to 7% in the control group. Thirteen out of 57 (22%) of participants with autism and 14 out of 84 control subjects (16.6%) were sometimes able to use such sounds and words, which was highly statistically significant, p-value <0.001). Similarly, 19 out of 57 (32.3%) participants with autism were never able to string words and sounds together such as, uh oh, mama, gaga and bye bye, compared to 4.7% in the control group. Sixteen out of 57 (28%) participants with autism and 6 out of 84 (7.1%) control subjects were sometimes able to do such things, which was highly statistically significant, p-value <0.001).

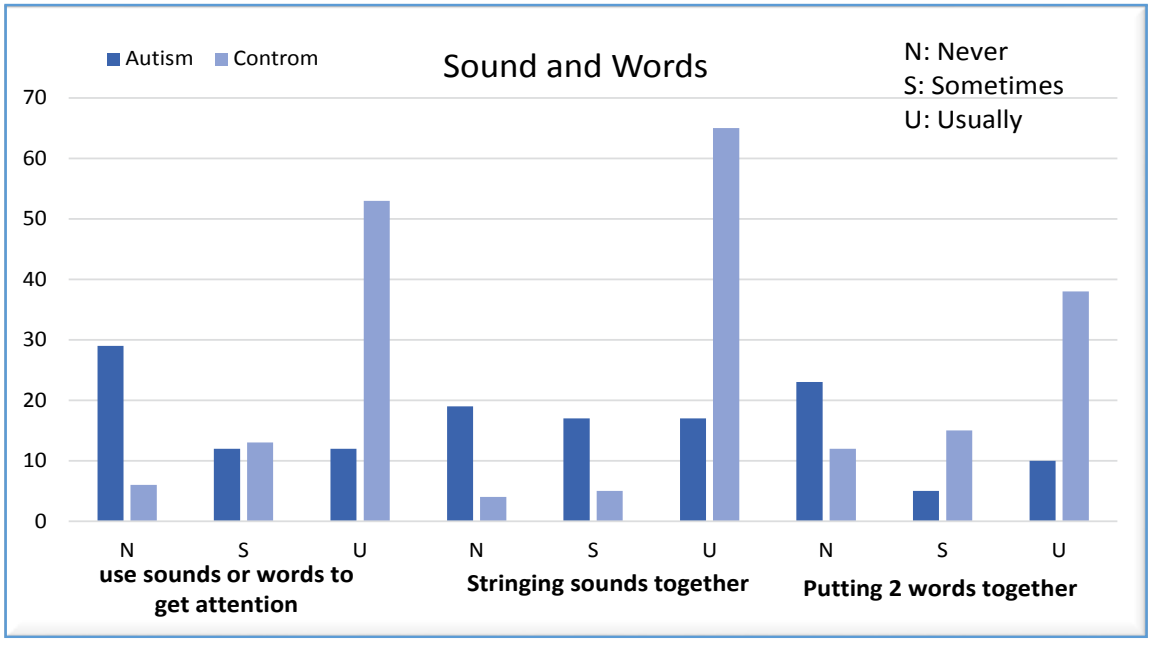
Twenty out of 57 (35%) participants with autism and 3 out of the 84 (3.6%) of the control subjects were unable to use any of the following constant words "ma, na, ba, da, ga, wa, la, ya, sa, sha", which was highly statistically significant, p-value <0.001. Moreover, 14 out of 57 participants with autism were able to use only one of two words while only 4 participants with were able to use more than 8 of those constant words. In contrast, 21 normal participants were able to use one to two words and 9 from the control group were able to use more than eight of those constant words, which was also highly statistically significant, p-value <0.001).

Thirty participants (52%) with autism and 9 (10%) from the control group were unable to use any meaningful words such as baba and mama. Moreover, 13 (22%) participants with autism were able to use one to three meaningful words compared with 35 (41%) control

subjects, which was highly statistically significant, p-value<0.001. in addition, 8 (14%) participants with autism and 20 (23%) normal control were able to use between four to ten meaningful words. One (1.7%) participant with autism and six (7%) normal control used more than 30 words by the age of 18 moths (statistically significant).

Twenty four out of the 57 (42%) participants with autism and 13 out of the 84 (15%) from the control group were unable to put two words together; for example, bye-bye daddy, which was statistically significant. However, five (8%) of the autistic subjects and 15 (18%) of the normal control, were sometimes able to put two words together. Moreover, 10 (17%) participants with autism compared to 36 (43%) of the control subjects were able to put two words together most of the time (highly statistically significant, p value is < 0.001).

Figure 4. Demonstrate sounds and words



Perception and understanding

20 out of 57 (35.08%) autistic subjects and 2 (2.3%) normal control were never able to look or turn their heads when their mothers call them.

Moreover, 27 out of 57(47.36%) autistic subjects and 11 out of 84 (13%) of normal control cannot understand different words or phrases without gestures. While

around 10 out of 57 (17.54%) autistic subject and 23 out of 84 (27.38%) normal subjects can understand 4 to 10 words without gesture (statistical significant, P < 0.001).

Object use

Furthermore, 25 out of 57 (43%) participants with autism and 2 (2%) from the control group showed no interest in playing with a variety of objects. However, 7 (12%) participants with autism and 55 out of 84 (65.47%) from the control group were interested in playing with a variety of objects most of the time (highly statistically significant, P< 0.001). With a significant p value (less than 0.001), there were 18 out of 57 (31.57%) participants with autism and 6 (7%) from the control group who were unable to use objects appropriately, e.g. using toothbrush to brush their teeth. While 7 (12%) participants with autism and 26 out of 84 (45.61%) from the control group could use correctly more than 8 objects.

Twenty out of 57 (35.08%) participants with autism and 11 (13%) controls were unable to stack any blocks. In contrast, there were 13 (22%) participants with autism and 26 out of 84 (30.95%) from the control group who were able to stack 3-4 blocks. In addition, 2 (3%) of the autistic subjects and 11 (13%) of normal subjects can stack more than 5 block, which was statistically significant p<0.023.

Furthermore, 34 out of 57 (59.64%) of participants with autism and 10 (12%) from the control group were not able to pretend play with toys, e g. feed a stuffed animal, put a doll to sleep or put an animal figure in a vehicle. However, 3 (5%) of participants with autism and 41 out of 84 (48.80%) control subjects were always pretending to play with toys, which was highly statistically significant, p<0.001.

Figure 5. Demonstrate perception, understanding and object use

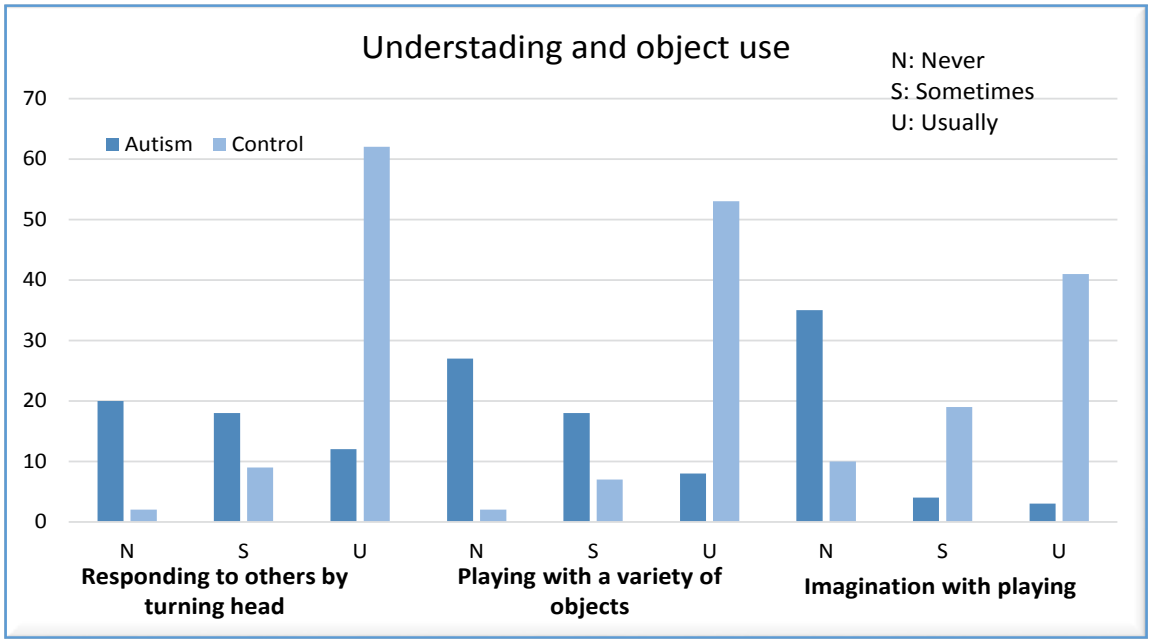


Table 5: Sounds, words, perception and object use

Characteristics	Cases (*n*= 57)	Control (*n*= 84)	P value
Number of constant sounds the child uses			*>0.001*
0	20	2	
1-2	14	23	
3-4	13	21	
5-8	4	15	
>8	4	12	
Number of meaningful words the child uses			>0.001
0	30	9	
1-3	13	35	
4-10	8	20	
10 -30	4	7	
>30	1	6	
Child understanding of words without gesture			>0.001
0	27	11	

1-3	6	21	
4-10	10	23	
11-30	3	11	
>30	5	8	
Appropriate use of objects such as cup and bottle			0.001
0	18	6	
1-2	14	17	
3-4	12	16	
5-8	5	15	
>8	7	26	
Number of blocks child can stack			>0.001
0	20	11	
1-2	10	15	
3-4	12	19	
>5	**2**	**11**	

Discussion

Autism spectrum disorder (ASD) comprises a group of complex neurodevelopmental disorders characterized by impaired social interaction and communication.[19] Identifying ASD as early as possible is the most important step to be achieved because early intervention can result in a significant improvement of associated symptoms. Delayed attainment of social skill milestones, including joint attention, social orienting, and pretend playing are important early warning signs of ASD. Furthermore, signs such as deficits in response to voice, calling their name,[14] and language impairment during communication are considered less specific signs of ASD. In addition, repetitive behaviors and restricted interests are signs, which may appear following the social skills and communication impairments[20].

Results from the current study demonstrated that ASD is more common among boys than girls (7:1). This finding is consistent with the other studies[21] thus suggesting that gender is a risk factor.

In the current study, no significant differences were found between participants with autism and control subjects in the health status of the mother during pregnancy (e.g. anaemia and diabetes), duration of pregnancy and the mode of delivery. This was contrary to a study conducted in Oman in 2010, which showed that the percentage of premature deliveries was three times higher in cases with autism than in control participants. Moreover, frequent incidences of serious illness or trauma during pregnancy were reported in the same study among participants with autism more than controlled subjects.[21]

The sociodemographic determinants, including parent's age, educational level and family income are similar in both groups. These findings suggest that there is no influence of these factors on the possibility of having child with autism.

Several breast-feeding practices and their influence on the chance of having child with autism have been conducted. It was proved that breast-feeding decreases the likelihood of a child to have autism spectrum disorder.[22,23] A case–control study conducted by Schultz et al. research group, based on an online parental survey of approximately 1000 children with autism and control group children reported the absence of breast-feeding is significantly associated with an increased likelihood of an autism spectrum disorder (OR 2.48, 95% CI 1.42–4.35). The study also found a prolonged duration of breast-feeding was associated with a decrease in the likelihood of an autism spectrum disorder diagnosis.[22] Alfarisi et al. concluded that an increased risk of ASD has been found to be associated with suboptimal breast-feeding practices in Oman.[21] However, despite all the previous studies, the present study demonstrated that there was no difference in the incidence of ASD among breast-fed and bottle-fed subjects compared to the control group. The results of the current study are not in

agreement with Alfarisi and Schultz studies, because the social practices for breast-feeding is strongly encouraged despite difficulties such as child rejection of breast-feeding. Therefore, child refusal of breast-feeding is not considered to be a warning sign of ASD.

Language development is a crucial life skill established in early childhood. Children who showed delay in their language skills should be detected early as it can be a warning sign about the child's developmental behaviour. Research over the past decades have determined multiple language predictors that are indicators of impaired language development, which assure earlier identification and thus early intervention.[24,25] These predictors are emotion and use of eye gaze, use of communication, use of gestures, use of sounds, use of words, understanding of words and use of objects. Children who are delayed in many of these indicators from around 18 months of age are more likely to have ASD. As such, evaluating these language predictors is a promising solution for identifying toddlers at risk and starting treatment earlier than 18 month of age, which offers the opportunity for significant early intervention.[34]

Regarding emotion and eye gaze, the current study showed that there is a significant difference between the group with autism and the control group. Subjects with autism had notable impairment in their eye gaze and emotional affect. About 26.3% from the group with autism demonstrated lack of warm and joyful expressions with gaze when they were under age 18 months while none from the control group demonstrated such difficulty. In addition, 57.8% from the group with autism exhibited a lack of shared attention with eye gaze when engaged with their parents and caregivers as compared to 8.3% from the control group. Furthermore, 45% of those with autism had lack of facial expressions in their first 18 months of age while in control group only 3% had this sign. Moreover, around 61.4% from the group with autism demonstrated poorly coordinated eye gaze and were unable to respond when their parents or caregivers pointed out objects to them. This difficulty was reported in only 10.4% of the control group. These findings are consistent with past research on children diagnosed with autism in their first two years of life.[15]

Previous reports confirmed that lack of communication is an early indicator of autism.[26] In the current study, it lack of communication in participants was detected in the first 18 months of age. In addition, the results showed that this was the most common concern for parents that led them to seek medical help for their children. However, our results showed that 38.5% of participants with autism were found to have difficulties in communicating with their parents and lack of expression for their demands before or around 18 months of age. While in control subjects, it was only 7%. Moreover, 56% of participants with autism were demonstrating a poor ability to attract the attention of their parents or caregivers. This difficulty was reported in only 2% of the control subjects. Furthermore, lack of shared enjoyment was a problem for 75.4% participants with autism while for the control group it was 10%. Moreover, those with autism exhibited more lack of sharing interest in their first 18 months of life than control subject (57% and 20% respectively).

In the field of words and sounds, the current study found that approximately half of the participants with autism were unable to use any sounds or words to seek help from others in their first 18 months of life while only 7% from the control group had this difficulty. Moreover, 32% of those with autism were unable to string any words together as against 4.7 % from the control subjects. Around 35% of participants with autism were unable to maintain a constant vocabulary compared with 3.6% of control subjects. A study conducted in Australia reported that failure of toddlers at 12 months to use sounds and words could be a risk factor for a future speech delay, ASD or any other developmental abnormality.[16] The same study demonstrated that at this age, it could be difficult for the parents to remember their child's communication ability compared to when child is older,[16] which likely explained the small percentages from the control group.

Furthermore, the current study found that 52% of participants with autism were unable to use any meaningful words and 42% were unable to string two

words together at all. In contrast, 10% of control subjects were unable to use any comprehensible words and 15% were unable to put two words together. It has been found that toddlers with ASD possess a limited vocabulary and less complex syllabic structures.[15]

In the current study, the lack of comprehensible words was evident with 82% of participants with autism being unable to comprehend what was said to them.

In addition, those with autism in the current study were unable to respond by looking or turning toward their parents when called. Additionally, they were unable to understand different words or phrases in the absence of clear prompting. In contrast, none of the control subjects demonstrated this difficulty. The findings were consistent with a prospective study in which three groups being compared were defined on the basis of diagnostic assessment at 24 months: (1) siblings with ASD (n= 15), (2) siblings not meeting diagnostic criteria for ASD (n= 82), and (3) low-risk controls (n= 49) - none of whom had ASD. Participants with ASD exhibited delays in early language and communication when compared with siblings and controls without ASD. Further, participants with autism exhibited delays in their understanding of words and use of gestures. The prospective study highlighted how delays in communication and language development can be early sign in those with ASD. The study recommended monitoring children for delays in gesture as such delays are among the earliest indicators of ASD.[27]

As it relates to use of every-day objects, the current study found that 44% of participants with autism were not interested in playing with a variety of toys and were likely to display repetitive movements with such objects instead. An observational study published in 2012 suggested that repetitive behaviour among young subjects with ASD in clinic and home settings was an early indicator of ASD.[28] Children gain an understanding of objects and people in their environment through the play. Observing a child during play is a helpful indicator for understanding what the child knows. By the age of 12 to18 months, toddlers start to push, pull, stack, turn on and otherwise physically manipulate objects. They start to play with different objects and use them in ways that appropriately foster healthy development. These developing abilities highlight the normal progression of children's play skills. This was an important consideration in the present study, which found that young subjects with ASD were unable to use objects appropriately, e.g. using toothbrush to brush their teeth or use the spoon to eat. Indeed, 32% of participants with autism compared to 46% from the control group were able to use about 30 objects correctly. In addition to that, 35% of those with autism were unable to stack any toy blocks when compared to 13% of the control group. Furthermore, 60% of participants with autism were unable to engage in imaginary play with toys, e.g. feed a stuffed animal, help a doll get off to sleep or put an animal figure in a vehicle. The play behaviors of children provide a baseline for understanding their overall developmental level; for example, imaginary play can reflect a child's ability to watch and imitate the actions of other people in their environment. In the current study, this important developmental milestone was less apparent in participants with autism as there were clear limitations to their social responses, which seemed to affect play behaviour and imaginary play in those under two years of age who had autism.[29]

Results from our study demonstrated statistically significant impairments of gesture for participants with autism at 12 to 18 months of age as compared with controls. These impairments were characterized by limited ability to point towards objects, lack of waving hands or head nodding, and difficulty in using the hand as a tool without directed gaze. Our results support several previous studies examining levels of numerous deficits in children with autism, such as difficulties in focusing on another person or drawing other people's attention to an object.[30] Other studies have emphasized that the main deficits reported were in gestural joint attention.[31] Another study that examined the gesture defect in subjects with autism concluded that the subjects studied were highly defective in symbolic gestures, particularly nodding their head as an acceptance sign and many other actions, and instead of this, they mainly communicate using primitive motoric

gestures.[32] This explains the difference in gesture that has been noticed between participants with autism and those without the disorder.

Limitations

The current study is dependent on memory recall of data, which could have introduced recall bias and misclassification error, and it is considered as one potential weakness. To overcome this bias, a future prospective study is highly recommended. In addition, because of the time limit the research was conducted on a relatively small sample size due to the difficulty in contacting families who had children diagnosed with autism because the disorder is not considered common.

Conclusion

The current study, which was conducted in the Riyadh area, identified many early warning signs of ASD in Saudi participants aged 12 to 18 months, including loss of shared enjoyment with family members, absence of early speech symbols such as stringing sounds together, using consonant sounds and using meaningful different words, loss of eye to eye contact between the child and others and lack of imaginative play.

Recommendation

Larger scale epidemiological studies are strongly recommended for the population of Saudi Arabia in order reach a conclusive decision about the importance of early detection of ASD through the early warning signs. Furthermore, education of primary health care providers and professionals about early warning signs associated with ASD would be essential.

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الملخص

الخلفية: التشخيص المبكر لطيف التوحد يعتبر من أهم الخطوات لعلاج طيف التوحد وذلك لأنه هناك علاقة وطيدة بين الاكتشاف المبكر وعلاج المرض. وقد أثبتت الدراسات ان الاضطرابات لدى أطفال التوحد تتعلق بمهارات يكتسبه الطفل الطبيعي ما بين عمر 12-18 شهر من ولادته. **منهجية البحث:** في هذه الدراسة الوصفية، تم إشراك عدد 57 من الأطفال المصابين بالتوحد ومقارنتهم ب 84 طفل طبيعي، وذلك بالقيام بمقابلات مع الوالدين أو رعاتهم وتعبئة استبانة، حيث تحتوي الاستبانة على أسئلة عامة (اجتماعية واقتصادية) عن الطفل ووالديه، بالإضافة إلى أسئلة عن تصرفات الطفل وسلوكه في عمر 18 شهراً وما دونها، كما تحتوي الاستبانة على شرح مبسط للبحث ونموذج إقرار بسرية المعلومات وطلب موافقة على تعبئته.

تم جمع البيانات في الفترة من يناير 2013م إلى مارس 2013م، ومن ثم تحليلها عن طريق برنامج (SPSS)

النتائج: أ ظهرت الدراسة أن ضعف مهارات التواصل بالعين مع أفراد العائلة، عدم القدرة على التعبير بالفرح او الحزن، عدم القدرة على إصدار أصوات معينة وعدم القدرة على اللعب التخيلي تعتبر من العلامات المبكرة لطيف التوحد لدى الأطفال بعمر 12-18 شهر السعوديين في منطقة الرياض.

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Characteristics of Child and Adolescent Populations Visiting a Public Child and Adolescent Psychiatric Clinic in Bahrain: A 30-Year Comparative Analysis

Ahmed Malalla Al-Ansari

الخصائص الديموغرافية للحالات المحولة إلى عيادة عامة، تعنى بالاضطرابات النفسية لدى الأطفال والناشئة في البحرين: مقارنة تحليلية على مدى ثلاثين سنة.

أحمد مال الله الأنصاري

Abstract

Objectives: The present study compared the population profile of patients attending a public child and adolescent psychiatric clinic in Bahrain from 2011 to 2012 with files from 1981 to 1982 for the same clinic with the view to identifying changes in bio demographic data and diagnostic categories. **Method:** A retrospective study based on patient files, the data for age, gender, source of referral, social class and diagnosis were extracted and entered into a special form. There were no exclusion criteria. **Results:** Compared with the 1981 population, cases from 2012 were generally below 12 years of age (60% vs. 40%) with lower mean age (7.3 yr. vs. 13.1%), were predominantly boys (70.9% vs. 54.4%) and mainly middle class (class 3= 49.1% vs. 16.4%). Referrals in 2102 were more likely to be by family or primary care physicians than teachers (59% vs. 50.2%, 27.3% vs. 17.9%). Differences in age group, gender, source of referral and social class were statistically significant (P=0.000). As regards diagnosis, the 2012 population highlighted an increase in diagnostic categories, such as Attention Deficit Hyperactivity Disorder (ADHD), autism, pervasive developmental disorder and selective mutism. There was a decrease in referrals of cases with conduct disorder and anxiety disorder. **Conclusion:** Thirty years of practice in child psychiatry showed more referrals of young children with ADHD and autism and fewer referrals of adolescents with conduct disorder and anxiety. Families and primary care physicians were the main source of referral at each time point. Changes in trends of diagnosis, referral pattern and age distribution of cases were discussed.

Key Words: child, psychiatric, profile, trends, Bahrain

Declaration of interest: None.

Introduction

Epidemiological research data reports up to 20% of children and adolescents suffer from mental disorders. Suicide is the third leading cause of death among adolescents and up to 50% of adult mental disorders have their onset in adolescence.[1] Furthermore, data from epidemiological studies provide cross sectional estimates of prevalence of psychopathology and help to support effective service development.[2]

Reports on the World Health Organization (WHO) child and adolescent mental health resources – Atlas project revealed substantial gaps in resources for child mental health in both high and low income countries.[3] In addition, gaps in the methodologies used in case ascertainment led to diagnosis shifting, not only in cases of autism and intellectual disability, but also in relation to the diagnosis of attention deficit/hyperactivity disorder (ADHD), posttraumatic stress disorder (PTSD) and juvenile bipolar disorder.[4,5]

The gender representations in the child psychiatric population were consistent across many countries. Girls outnumbered boys in internalizing problems while boys were over represented in many externalizing problems.[6] With regard to prevalence studies, ADHD was found to be the most common specific child psychiatric disorder, 6.4%.[7] However studies from developing countries showed different results. Malhotra, in a 26-year study from North India, reported on characteristics of the child psychiatric outpatient population. The study found the most common child psychiatric disorder was intellectual

disability (18-33%) followed by stress related disorders and trends toward referrals of older children with serious mental disorders.[8] Other studies from Kerala state, South India and Nigeria found an association of stressful life events such as death, migration, separating from parent and physical abuse with the occurrence of psychiatric disorders in children.[9,10]

Bahrain is an archipelago situated in the Gulf region, east of Saudi Arabia. It covers an area of approximately 750 sq. km, and had an estimated population of 1.25 million in 2010. Health services are free and accessible to all residents. The country is characterized by a low infant mortality rate, (7.2per 1000), and a high life expectancy of 74.8 years.

The Child and Adolescent Psychiatric Unit (CAPU), at the Psychiatric Hospital/Ministry of Health has been the main facility for children with psychiatric and behavioral problems in Bahrain since 1981. The unit is an extension of a small project under the umbrella of school of health that was established in 1975 in a local health centre. During this time, the new service was introduced to the public, to medical practitioners, and others.

CAPU has a busy outpatient clinic (400 new referrals annually), and an inpatient clinic/day care unit with a 12-bed capacity for children aged 12 years and younger. The inpatient unit program utilizes a structured behavioral modification principle within the context of a reward system of a token economy. It provides a living and learning environment in which staff present the opportunity for modelling behavior and counselling the family. In 1992, the CAPU moved to a separate new premises purposely built to house both an outpatient clinic for children up to 18 years and inpatient/day care unit for children up to 12 years of age.

In Bahrain, the profile of the child psychiatric population in 1981-1982 showed many unmet needs. More of the adolescent population was referred to the psychiatry clinic. Patients usually came from low socioeconomic backgrounds and were referred mainly by family members with diagnosis of mental and reactive disorders. Very few cases of autism, ADHD or conduct related problems were reported.[11]

The present study focused on several key issues in determining the trends and characteristics of the child and adolescent mental health population such as:

1- Changes in the source of referred cases.
2- Variation in demographic characteristics and diagnosis of these children who attended the same clinic over a 30-year period.

Method

Design: Retrospective study based on patient files.

Sample: Child and adolescent cases who attended the Child and Adolescent Psychiatric Unit – (CAPU), psychiatric hospital in the period between 1st March 2011 to 28 February 2012 and in 1981. No exclusion criteria were applied to select cases for the study.

CAPU receives referrals directly from families, primary care practitioners, pediatricians, self-referral, schools, and other social agencies. Appointments are secured by telephone or a visit. Waiting times for assessment does not exceed two weeks from initial contact.

Procedures: Case files were reviewed by the same person (author) in both 2011 and 1981.

Special forms prepared for the study were completed for each case. The form gathered information relating to the following items: age, gender, social class, parent education and job type, source of referral and diagnosis according to Diagnostic and Statistical Manual of Mental Disorder, Third Edition (DSM-III) for the 1981 sample and DSM-IV and the International Classification of Diseases, Tenth Edition (ICD 10) for the 2011 sample.

Neither cases nor patients were interviewed or contacted. Ethical approval was obtained from the research committee for secondary care, Ministry of Health. Social class was constructed following a modified Redlich and Hollingshead scale.[12]

Analysis: Data were analysed using the Statistical Package for the Social Sciences, Version 18.0 (SPSS v. 18.0). Chi-square test was used to assess differences whenever applicable.

Results

Table 1 shows the children's psychiatric profiles for the years 1981 and 2011 by examined-factors. The 2011 cases (compared to 1981) were younger in age; those below 12 years old constituted around 60% vs. 40% of cases with a mean age of 7.3 years (P=0.000). They were predominantly boys (70.9% vs. 54.4%) (P=0.000) with a middle class status (class 3: 49.1% vs. 16.4%) (P=0.000) and were referred mainly by family (59% vs. 50.2%).

Table 1: 1981 and 2011 child psychiatric population by age group, gender, social class and source of referrals

Factor	1981		2011	
	N	%	N	%
***Age group**				
0-12 Year	78	40	301	68
13-17 Year	117	60	143	32
Mean Age	12.1 Yr.	SD 4.2	7.3 Yr.	SD 3.9
***Gender**				
Male	106	54.4	315	70.9
Female	89	45.6	129	29.1
***Social Class**				
Class 1	2	1.03	2	0.5
Class 2	5	2.56	16	3.6
Class 3	32	16.41	218	49.1
Class 4	77	39.49	156	35.1
Class 5	79	40.51	52	11.7
***Source of Referrals**				
Family	98	50.25	262	59.0
School	34	17.44	45	10.1
Health Center	35	17.95	121	27.3
Self	13	6.67	8	1.8
Other	15	7.69	7	1.6
Total	**195**	**100**	**444**	**100**

***Significant difference at 0.05 using Chi square test.**

Primary care physicians and teachers referred 27.4% and 10.1% of the cases in 2011 in comparison to 17.9% and 17.4% in 1981 (P = 0.000).

Table 2 shows the distribution of 1981 and 2011, cases according to DSM-III and DSM-IV.

Table 2: Distribution of cases by diagnosis (DSM III for 1981 cases – DSM IV for 2011 cases)

Diagnosis	1981		2011	
	N	%	N	%
Intellectual Disability	62	31.80	119	26.8
*Learning Disorder	0.0	0.0	38	8.6
*Motor Skill Disorder	0.0	0.0	1	.2
Communication Disorder	4	2.05	12	2.7
Pervasive Development disorder	1	0.5	25	5.6
*Overanxious Disorder	48	24.63	0.0	0.0
*Autism	3	1.54	59	13.3
*ADHD	0	0.0	52	11.7
*Conduct Disorder	28	14.36	3	.7
ODD	1	0.5	6	1.4
Eating Disorder	1	0.5	2	0.5
Elimination Disorder	3	1.54	15	3.4
Separation Anxiety Disorder	4	2.05	12	2.7
Selective mutism	0	0.0	6	1.4
Reactive Attachment Disorder	0	0.0	2	.5
Stereotype Movement Disorder	0	0.0	1	.2
Others (Schizophrenia – Bipolar	0	0.0	1	.2
Adjustment Disorder – *Cognitive Deficit, O.C.D)	30	15.39	43	9.7
* Deferred – No diagnosis	10	5.13	45	10.2
Total	**195**	**100.0**	**444**	**100.0**

*Significance difference at 0.05 using Chi-square test

Diagnosis of intellectual disability ranked first in both years with 31.8% in 1981 and 26.8% in 2011. Anxious disorder diagnosis that reached up to 24% in 1981 was not used in 2011 while ADHD, which was not present among the 1981 cases, reached 11.7% in 2011. The diagnosis of autism was low at 1.5% in 1981, but increased to 13.3% in 2011. However cases with conduct disorder diagnosis decreased from a high 14.3% in 1981 to a low of 0.7% in 2011. The diagnosis of pervasive developmental disorder, learning disorder and selective mutism showed a marked increase in 2011 compared to 1981. However, cases of eating disorder, elimination disorder and separation anxiety disorder remained at the same level for the two examined periods. Cases that did not complete their diagnosis were twice as frequent in 2011 in comparison to that of 1981.

Discussion

There was a shift in the type of referred cases where younger age children were more represented in the 2011 sample compared with that of 1981. This change might indicate greater acceptance that young children have psychological problems. Another contributory factor is the increase of young children with intellectual disability, autism, and learning disorder in the 2011 cases. The preponderance of boys among the cases in 1981 and more so in 2011 was in keeping with the epidemiological studies of psychiatric illness in childhood.[13,14,8]

Most investigators did not find an association between social class and service use.[2] In our sample, there was a marked increase in the use of the service by middle class families with time at the expense of those from low social class. This might reflect an increase in referring children with disorders which are not associated with the social class and/or the clinic became more accessible to middle class clients who in the past were reluctant to bring their children to a psychiatric hospital for social reasons. This increase in the use of service by the middle class cannot be explained solely by the increase in their proportion in the population.

In the 30 year period, families remained the main source of referrals for their children. However cases referred by teachers dropped to a low of 10% in 2011. It might be that teachers' advice to families about their children's educational and behavioral problems resulted in more families taking the initiative and contacting the clinic for help. Another important factor is the role of the media in outlining the early signs and symptoms of different behavioral and psychological disorders.

Recently, it has become more difficult for schools to call for appointments without informing the Ministry of Education. All referrals to outside the Ministry for consultations should be screened by a central office of school counselor specialists. This might hinder some schools from reporting some children with minor behavioral problems. On the other hand, we see an increase in referrals coming from local health center doctors. This reflects an increased awareness among medical professionals regarding early recognition and referral of children with behavioral problems, such as ADHD and autism.

As far as the diagnostic profile is concerned, cases registered with intellectual disability remained high (more than quarter of all cases in 1981 and 2011). All children 18 years and below with this diagnosis were directed to CAPU as it is the only facility in the kingdom for certification in order to get social benefits and acceptance at community rehabilitation centers.

In 2011, the children and adolescents referred with anxiety or stress related disorders were registered probably under other diagnostic categories such as adjustment disorder or no diagnosis. We have noticed that cases with mild neurotic or conversion disorder due to relationship problems were referred with less frequency to CAPU over time. At present, in the school system, the counselling services have developed markedly in Bahrain. This could explain the notable drop in the diagnosis of the over-anxious. Each school is well staffed with experienced counselors who deal effectively with such problems. Only severe cases requiring pharmacological treatment are referred to psychiatric services. A major shift in the diagnostic profile of 2011 cases was the increase in cases with ADHD and autism which reflects an increased awareness of the importance of early referrals of such cases by both the public and professionals. In addition, the CAPU is considered the central diagnostic place for all suspected cases of autism in the Kingdom. The low prevalence rate of conduct disorder in 2011 is not considered a real decrease, as many of these cases were either diagnosed as ADHD or as learning disorders, or borderline intellectual disability.

In recent years, teachers have been referring more students with selective mutism and learning issues compared with 1981. In 1981, teachers were referring children with severe behavior problems who could not be managed in the class. Children receiving a deferred diagnosis registered more frequently in 2011 compared with 1981. In recent years, the diagnostic process takes more than one session especially with the use of multiple instruments to collect information for cases presented with provisional diagnosis of ADHD, autism and intellectual disability. Hence, many of these cases missed several appointments and so diagnosis was recorded as incomplete. The present study has implications for policy makers in child mental health. One should rearrange the targeted population served by child psychiatry by developing a separate service for children above 12 years of age with intellectual disability and to create special services within the CAPU for disorders such as autism and ADHD. Another suggestion is to refer children with learning disorder or difficulties to school mental health centers, which focus on this population, to avoid duplication of services. In the future, the CAPU

managing team may be redistributed to several smaller teams according to the most prevalent referred disorders for the sake of both service and professional development.

Study Limitations

The present study is limited by several drawbacks due to the design used to collect the information. Retrospective collection of data carries with it known limitations. The present study used a clinic based survey and so its results cannot be generalized to the community as a whole, but it might give an indication about the prevalence rates of disorders among the child and adolescent population. The study period is quite wide and the information was collected only at both ends, and so we missed the actual trends across regular five or 10 year periods.

Conclusion

Time trends of the child and adolescent psychiatric population that attended a public clinic in a tertiary care hospital showed a significant shift in both bio demographic characteristics and diagnostic profile. Young children with autism and ADHD were referred more while adolescents with anxiety, stress related disorders and conduct disorders were referred much less over the 30 year period. The trends also indicate more public acceptance of the presence of mental disorder among young children and reduction of the social stigma for seeking psychiatric help especially by middle class families. Families and primary care physicians have become the main source of referrals rather than the education system.

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الملخص

أهداف الدراسة: دراسة الخصائص الديموغرافية للحالات المحولة إلى العيادة خلال العام 2011 – 2012 ومقارنتها بمثيلتها خلال الأعوام 1981-1982.

المكان: وحدة الأطفال والناشئة النفسية – مستشفى الطب النفسي – مملكة البحرين

الطريقة: دراسة رجعية من خلال دراسة الملف الصحي للمرضى المحولين إلى العيادة منذ مارس 2011 إلى فبراير 2012، ومقارنتها للفترة بين مارس 1981 إلى فبراير 1982م. استخرجت المعلومات المتعلقة بالسن – نوع الجنس – مصدر التحويل – المستوى الاجتماعي، الاقتصادي والتشخيصي حسب الفهرس الأمريكي للأمراض النفسية الرابع المراجع لعام 2011، والفهرس الأمريكي للأمراض النفسية الثالث للعام 1981م.

لم يستثنى أي من التحويلات خلال الدراسة، ولم يكن هناك مقابلات للأطفال أو عائلاتهم، جرى تحليل المعلومات وعرضها بطريقة وصفية.

النتائج: كانت أعمار المحولين في عام 2012 أصغر سناً بالمقارنة مع عام 1981، كوّن ما تقل أعمارهم عن 12 سنة ما مجموعه 60%، متوسط معدل العمر 17.3 في عام 2012، مقارنة بـ 13% في عام 1981. غلب على المحولين جنس الذكور في كلتا المجموعتين (70.9% في عام 2012، 54.4% في 1982)، ازداد عدد المحولين من الطبقة الاجتماعية المتوسطة في عام 2012 (49.1% مقارنة بـ 16.4%)، مصدر التحويل كانت متشابهة في الفترتين، ولكن لوحظ انخفاض في عدد المحولين من المدارس على حساب المحولين من أطباء الرعاية الصحية الأولية، أما التشخيص في عام 2012 فقد كان هناك زيادة في معدل تشخيص في نقص الانتباه وفرط الحركة، اضطراب التوحد والصمت الاختياري وانخفاض في معدل تحويل الحالات التي لديها اضطراب في السلوك والقلق.

المناقشة والخلاصة: خلال ثلاثين عام من العمل في الطب النفسي للأطفال، تبين زيادة في معدل التحويل للأطفال اللذين لديهم اضطراب التوحد ونقص الانتباه وفرط الحركة، يقابله انخفاض في عدد المحولين من الأطفال ذوي اضطراب السلوك والقلق. مازالت الأسرة وأطباء الرعاية الصحية الأولية هم مصدر التحويل في عام 1981 و2012م، جرى مناقشة ومعرفة الأسباب المؤدية إلى هذه التغيرات.

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Relationship between Stressors Due to Siege of Gaza Strip on Anxiety, Depression and Coping Strategies among University Students

Abeer Joma'a, Abdel Aziz Thabet

العلاقة ما بين الضغوط النفسية الناتجة عن الحصار على غزة والقلق، والإكتئاب، وطرق التأقلم لدى طلاب الجامعات في قطاع غزة

عبير جمعة، عبد العزيز ثابت

Abstract

Aim: The present study assessed siege related stressors and their impact on the depression, anxiety and coping strategies among university students in the Gaza Strip. **Method:** It is descriptive analytic study comprised of 399 randomly selected university students from the four main universities in Gaza Strip (Al-Aqsa, Al-Azhar, Al-Quds Open and Islamic University). Five questionnaires were used: sociodemographic questionnaire, the Gaza Stressful Situations Checklist, the Hamilton Anxiety Rating Scale, the Beck Depression Inventory and the Carver Brief Coping Scale. **Results:** The most frequently reported stressors were: sharply increased prices due to closure (92% of students), studies being affected so much due to cut-off of electricity (83.5%), and shortage of gas. Results showed that mean stressors in men were 12.38 and 10.33 in women. The study showed 9.5% of men and 12% of women had severe depression although no gender differences were found. In addition, 10.3% of men and 13.8% of women had anxiety. There was a statistically significant positive relationship between total stress due to siege and depression symptoms and anxiety. The most frequent coping strategies were finding comfort in religious beliefs (78.2%), thinking about what steps to take (71.4%), and learning to live with the situation (67.7%). A significant negative relationship was found between total score of stress due to siege and total coping strategies. **Conclusion:** The Gaza siege has had lasting negative effects on Palestinians, which has led to increased mental health problems among and to them using fewer positive coping strategies. Humanitarian organizations should play a more positive role to protect the Palestinian community from the negative consequences of siege. Further research is recommended to evaluate the impact of siege on Palestinian people in all aspects of life and to provide therapeutic interventions for university students with moderate and severe depression.

Key words: Anxiety, depression, coping strategies, Gaza Strip, siege, stress, university students

Declaration of interest: None

Introduction

Since June 2007 when Hamas governed the Gaza Strip, Israel has imposed a tight blockade on the area as constitutes collective punishment for 1.66 million people. The Gaza Strip has two main crossings that connect it to the rest of the world, Rafah in the south and Erez in the north. The population of Gaza is 1.66 million, with over 50% under 18 years of age; 38% of Gazans live in poverty and 26% of the Gazan workforce, including 38% of youths, is unemployed. The average wage declined by over 20% in the past six years; 54% of Gazans are food insecure and over 75% are aid recipients; 35% of Gaza's farmland and 85% of its fishing waters are totally or partially inaccessible due to Israeli military measures. An estimated 50-80 million liters of partially treated sewage are dumped in the sea each day with over 90% of the water from the Gaza aquifer being undrinkable; 85% of schools in Gaza run on double shifts, representing huge overcrowding, about one-third of the items in the essential drug list are out of stock.[1] Fuel for the power plant remains limited at 68% of its maximum capacity. Cooking gas imports have been at around 53% of average needs. Almost no diesel and petrol are allowed for the commercial sector. Due to

the power plant fuel restrictions, exacerbated by intra-Palestinian disagreements, there is a chronic lack of electricity and regular blackouts affecting provision of essential services, including water supply, sewage treatment, and health services.[2]

In the past seven years, few studies have investigated the impact of siege on Palestinians living in the Gaza Strip. One study of Palestinian families found that the most commonly reported stressors were the sharp price increases, a feeling of living in a big prison, and the experience of being unable to find essential items in the market.[3] Similarly, a study of 502 families in the Gaza Strip identified the common stressful situations due to blockade were a general feeling of living in a big prison, the inability to finish construction and repair work in people's homes due to a chronic shortage in cement and building materials, and the sharp increase in prices in commodities in recent years.[4]

University students, as part of the Palestinian community, have been exposed to variety of stressors beside the academic ones. Such stressors can lead to mental health problems, including depression and anxiety. A study examining the impact of the siege on the mental health of university students in the Gaza Strip showed that 15.8% had severe anxiety and 40.3% had moderate to severe depression.[5] Another study describing the psychological effects of exposure of Palestinian adolescents living in the Gaza Strip showed that 40% reported moderate or severe levels of depression; 94.9% were classified as having severe anxiety levels; and, 69.9% demonstrated undesirable coping responses.[6] In Africa, researchers examined the prevalence of depression among students at the University of Ghana to discover that life stressors accounted for 43% of the signs of depression in them. Women reported more symptoms of depression.[7]

People tend to face stressful situations by using coping strategies, which are defined as "constantly changing cognitive and behavioral efforts to manage specific external and/or internal demands that are appraised as taxing or exceeding the resources of the person."[8] Stress reactions differ from one person to another. Some experience difficulty in coping with stress and may develop psychological problems. A study of university students in Karachi, that assessed the levels of stress in the face of terrorism and the adopted coping strategies, showed how they commonly used faith in God and religious activities as coping strategies.[9] Another study that identified types of coping strategies and psychological adjustment level among students from medium community colleges in Gaza showed that coping strategies of life stress in the study were: turning to religion as the highest ranked by 82% of respondents followed by planning by 76.6%. Humor style was ranked lowest by 58.3% followed by behavioral withdrawal relative weight (60.1%).[10] Another study that examined the stress levels and coping strategies of professional students belonging to the physical education and engineering professions showed that stress due to all the stimuli was significantly higher among women when compared with men in their profession. Coping strategies were higher in men than women in their respective profession, but women studying physical education had higher coping strategies than men and women who studied engineering.[11] In a study of students at the Adnan Menderes University, students' depression scores and self-confident, optimistic approaches and social support had a negative relationship with depression scores and positive relationship of helpless and submissive with depression.[12] A recent study of Iranian students showed a significantly negative correlation between problem-focused coping strategies and mental health while a significant positive correlation was found between emotion-focused coping strategies for dealing with mental health difficulties among students.[13]

The present study assessed the relationship between stressors due to siege of the Gaza Strip on anxiety, depression, and coping strategies among university students.

Method

Sample

The present study consisted of a stratified random sample of students (N=410) from four universities in the Gaza Strip (Al-Aqsa University, Al-Azhar University, Al-Quds Open University and Islamic University). The total number of respondents was 399 with a response rate of 97.3%. Two hundred thirty two participants (58.1%) were women and 167(41.9%) were men. One hundred thirty five (33.8%) of the participants were from Islamic University, 92 (23.1%) were from Al-Aqsa University, 91(22.8%) were from Al-Quds Open University, and 81 (20.3%) were from Al-Azhar University.

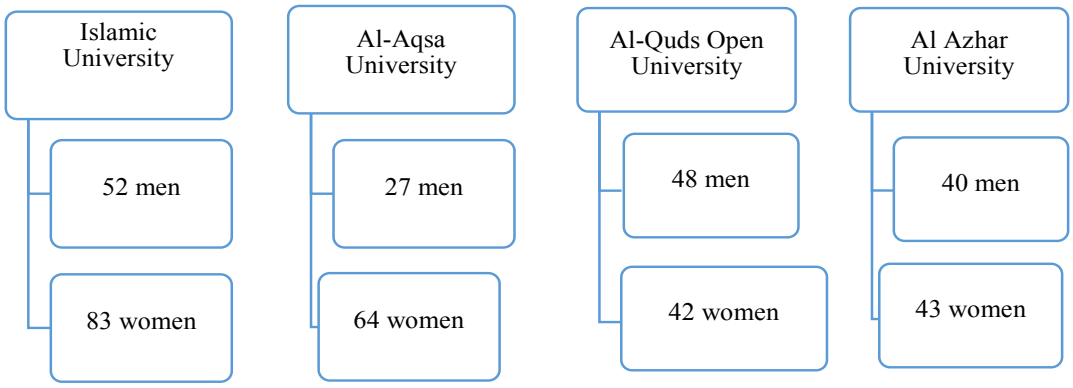

Figure 1. Distribution of the sample

Study procedure

The data were collected from four universities in the Gaza Strip (Al-Aqsa University, Al-Azhar University, Al-Quds Open University and Islamic University) after receiving official approval from each, which needed to be obtained for the universities to be included in the study. Helsinki committee (Ministry of Health) gave approval to carry out the study. Informed consent was obtained from each student. The purpose of the study, confidentiality information and some instructions were provided together with a statement about student right to participate or refuse. Data were collected by four assistant professionals trained for four hours in data collection of the present sample and criteria for selecting students in the second semester of the academic year 2013 to 2014. Each student completed five questionnaires, which took approximately 25 minutes. The data collectors were available to address questions when necessary.

Measures

Sociodemographic questionnaire

The researcher prepared a sociodemographic questionnaire, which included name, gender, date of birth, marital status, university, studies level, specialty and governorate.

Gaza Stressful Situations Due to Siege Checklist[14]

Personal experience of stressful situations was evaluated by using the Stressful Situation Due to Siege Checklist. The checklist was developed in 2009. It was subsequently modified for university students describing the most commonly reported stressful experienced during the last seven years of closure and siege of the Gaza Strip. It is comprised of 22 items requiring either yes or no response with yes = 1 and no = 0. An overall score is achieved by summing all the answers. In the present study, the split half reliability of the scale was high (r = .70). The internal consistency of the scale was calculated using Chronbach's alpha, and was high (α= .78).

Beck Depression Inventory Short form 13 item (BDI; Beck et al., 1988)[15]

The BDI is one of the most widely used instruments to assess depression. Its main aim is to measure depression symptoms and severity in persons age 13 and older. The inventory was validated in the Palestinian culture by Thabet.[16] The BDI has gone through multiple revisions, include BDI-I (1), BDI-IA (2), BDI-II (3), and BDI for

Primary Care (BDI-PC), now known as BDI Fast Screen for Medical Patients (BDI-FS). A 13-item short form is more recent was used in this study. The severity of depression is classified on the basis of the total score; in a normal community sample, a BDI score <4 suggests no or minimal depression, 5 to 7 represents mild to moderate depression, 8 to 15 is moderate to severe, and <= 16 indicates a severe level of depression. It is a universal scale; its validity and reliability are already tested. The BDI demonstrates high internal consistency, with alpha coefficients of .86 and .80 for psychiatric and non-psychiatric populations respectively (Beck et al., 1988).[16] For the present study, the Chronbach's alpha was .86 and split half was .80.

Hamilton Anxiety Rating Scale (HAMA-A)[17]

The HAM-A was one of the first rating scales developed to measure the severity of anxiety symptoms and is still widely used today in both clinical and research settings. The scale consists of 14 items, each defined by a series of symptoms. It measures both psychic anxiety (mental agitation and psychological distress) and somatic anxiety (physical complaints related to anxiety). Although the HAM-A remains widely used as an outcome measure in clinical trials, it has been criticized for its sometimes poor ability to discriminate between anxiolytic and antidepressant effects, and somatic anxiety versus somatic side effects. The HAM-A does not provide any standardized probe questions. The items are rated on a five-point scale and summed to provide a score ranging from 0 to 56. A score of 17 or less represents mild anxiety, a score between 18 to 24 mild to moderate anxiety, and a score of 25 and above moderate to severe anxiety. The cut-off scores have not been validated with older adults and there are no published norms for older adults.[18] For the present study Chronbach's alpha was .88 and split half was .82.

Carver Brief Coping Scale (Brief COPE)[19 20 21]

Carver and colleagues developed the Brief COPE as a flexible multidimensional coping inventory for a broad range of applications in applied psychology. In the Brief COPE, 28 items are presented in the form of a coping statement. Respondents are asked to rate whether they have or have not been using each way of coping on a fully anchored four-point scale ranging from 'I haven't been doing this at all' to 'I've been doing this a lot'. Factor analyses demonstrated that these four strategies characterized coping across the developmental lifespan: 1) active avoidance focused (4,6,9,11,13,16,19,21,26), 2) problem- focused coping (2, 5, 7, 10, 14, 23, 25), 3) positive coping (12,15,17,18, 24, 28), and 4) religious denial coping (3, 8, 22, 27)[22]. The internal consistency in this study was measured using Chronbach's alpha and was .80 and split half was .78. The long version has been used with the Palestinian society and showed high reliability.[21]

Data analysis

Data were analyzed using The Statistical Package for the Social Sciences, Version 20.0 (SPSS. V.20). Data coding and cleaning were done before analysis. Frequency tables that show sample characteristics and plot differences between various variables were also completed. Moreover, independent samples t-test, one way ANOVA and Pearson's correlation coefficient tests were also used. Frequency and percentage of siege items was presented in table form. Means of stressors, anxiety, depression and coping strategies were calculated. Differences between the mean of two groups as gender was calculated by independent t-test. One way ANOVA was conducted for means of more than two groups.

Results

Sociodemographic characteristics of the study sample

Results showed that the total sample selected for the current study was 399 students; 167 (41.9%) were men and 232 (53.3%) were women. Age range from 18-39 years with a mean age of 20.7 years (SD=2.36 years). Regarding the place of residence, the study showed that 18% live in north Gaza, 57.4% live in the Gaza area, and 19% live in the middle area, 4% live in Khan Younis, and 1.5% live in the Rafah area. Regarding university, 135 attended the Islamic University (33.8%), 83 (20.8%) attended Al-Azhar University, 91 (22.8%) attended Al-Aqsa University, and 90 (22.6%) attended Al-Quds Open University.

Table 1: Sociodemographic characteristics of the study sample (N= 399)

	No	%
Gender		
Male	167	41.9
Female	232	58.1
Age		
From 18 to 23	378	94.7
From 24 to 30	15	3.8
From 31 to 39	6	1.5
Place of residence		
North Gaza	72	18
Gaza	229	57.4
Middle area	76	19
Khan Younis	16	4
Rafah	6	1.5
University		
Islamic University	135	33.8
Al Azhar University	83	20.8
Al Aqsa University	91	22.8
Al Quds Open University	90	22.6

Stressful situations due to siege on Gaza Strip

According to Table 2, which reported types of stressors due to siege, 367 participants (92%) said they were affected by sharp price increases due to closure; 333 said their studies were affected so much due to cut-off of electricity and shortage of gas (83.5%); 285 said parents had been unable to help in getting fees for the university for participant and/or siblings due to lack of money (71.4%).

Table 2: Types and frequency stressful situations due to restriction of movements and siege (n = 399)

Items	Yes		No	
	No	%	No	%
1. Prices are sharply increased due to closure.	367	92	32	**8**
2. My study affected so much due to cut-off of electricity and shortage of gas.	333	83.5	66	**16.5**
3. My parents cannot help in getting fees for the university for me and my brothers due to shortage of money.	285	71.4	114	**28.6**
4. I feel I am in a big prison.	263	65.9	136	**34.1**
5. We had difficulties in buying what we need.	256	64.2	143	**35.8**
6. We cannot finish some construction and repair work in my house due to shortage of building materials.	252	63.2	147	**36.8**
7. I cannot find what we need in the market.	247	61.9	152	**38.1**
8. I found difficulties in studying outside Gaza because of the siege and closure.	239	59.9	160	**40.1**
9. I had difficulties in finding transport from home to my university due to shortage of gas.	213	53.4	186	**46.6**
10. I was not able to get specific medicine for me or for a family member.	213	53.4	186	**46.6**
11. My pocket money is not enough.	212	53.1	187	**46.9**
12. My parents cannot help in getting marriage for my brothers due to shortage of money.	208	52.1	191	**47.9**
13. I had thoughts of immigration and finding another place.	204	51.1	195	**48.9**
14. I need to travel outside the Gaza Strip to get treatment and I cannot.	184	46.1	215	**53.9**
15. Social visits are less than before.	183	45.9	216	**54.1**
16. I was unable to travel to visit my relatives in West Bank due to siege.	182	45.6	217	**54.4**
17. I had suffering of not able to receive proper medical care.	164	41.1	235	**58.9**
18. My father lost his working due to siege.	143	35.8	256	**64.2**
19. I start thinking of leaving my study to work to help my family.	96	24.1	303	**75.9**
20. I went to Zakat organizations and other organizations to get food.	83	20.8	316	**79.2**

21. One of my family members died due to prevention of traveling for treatment.	74	18.5	325	**81.5**
22. I was prevented from visiting one of my family members in Israelis jails.	58	14.5	341	**85.5**

Gaza stressful situation due to siege and other socioeconomic variables

In order to find differences in types and severity of stressful situations due to siege and other sociodemographic variables, such as gender and type of university, an independent t-test was conducted. In addition, a one-way ANOVA was done for groups more than two.

Results showed that the mean for stressful situations in men was 12.38 (SD= 4.89) and 10.33 for women (SD= 3.89). There were statistically significant differences in stress for men (F= 4.65, p =0.001).

Tukeys post-hoc test showed that there were statistically significant differences in stressful situations for participants from Al-Quds Open University when compared with student responses from the other three universities (F= 5.59, p = 0.001). This suggested students studying at Al-Quds Open University experienced more stress due to siege than those students attending the other three universities did.

Frequency of depression among the study sample

The study showed that the most common depression symptoms were feeling "discouraged about the future" (41.4 %) followed by "get more tired than usual" (36.6), and "not working as usual" (33.3%). The least commonly reported depression symptoms were having "suicidal thoughts" (6.5%) and feeling "disappointed at self" (10.3%).

Prevalence and level of depression in relation to gender

The results showed that 86 participants appeared to have severe depression (21.5%). Chi Square test was conducted showing no statistically significant differences in level of depression according to gender ($\chi 2 = 0.37$, df = 3, p = 0.95). In addition, Tukeys post-hoc test showed no statistically significant differences in depression levels according to type of university (F=1.17, p = .31)

Table 3: Prevalence and level of depression in relation to gender

Level of depression		No depression	Mild depression	Moderate depression	Severe Depression
Male	No	18	32	79	38
	%	4.5	8.0	19.8	9.5
Female	No	25	49	110	48
	%	6.3	12.3	27.6	12.0

$\chi 2 = 0.37$, df = 3, p = 0.95

Prevalence of anxiety symptoms according to Hamilton Anxiety Scale (HAMA-A)

According to the study, the most commonly reported anxiety symptoms were insomnia (21.8%), restlessness (20%), depressed mood (17.8%), and somatic complaints (16%). The least common were anxious mood (7.8%) and cardiovascular symptoms, such as palpitations (7.8%).

Prevalence of anxiety among the study sample

There were 303 (75.9%) participants reporting no anxiety "0-19 total scores", 96 (24.1%) had anxiety "20 and above scores". For men, 31.6% had no anxiety and 10.3% had anxiety, while 44.4% of women had no anxiety and 13.8% had anxiety. Chi Square test was conducted showed no statistically significant differences in level of anxiety according to gender ($\chi 2 = 0.03$, df = 1, p= 0.90).

Table 4: Prevalence of anxiety among the study sample

		Male	Female	Total
No anxiety	No	126	177	303
	%	31.6	44.4	75.9
Anxiety	No	41	55	96
	%	10.3	13.8	24.1

$\chi 2 = 0.03$, df = 1, p = 0.90

Tukeys post-hoc test showed that there were statistically significant differences in anxiety for participants from Al-Quds Open University when compared with those attending the other three universities (F= 3.56, p= 0.01). This suggested that students studying at Al Quds Open University experienced more anxiety than students at the other three universities did.

Types of coping strategies

The most common coping skills used by students (Most of the time/Always) were: finding comfort in religious beliefs as reported by 78.2%, thinking about what steps to take by 71.4%, learning to live with the situation as reported by 67.7%, and asking advice/help from others by 65.7%. The least common coping strategies used were using sedatives/drugs to feel better as reported by 23.12%, using sedatives/drugs to get through by 26.8%, and making fun of situation left 28.8% feeling more positive.

Our results showed that mean coping was 66.85 in men compared to 66.37 in women. Active avoidance-focused coping was 23.41 in men and 23.44 in women whereas problem- focused coping was reported equally as 15.36 by men and women. Positive coping was 14.19 in men compared to 14.00 in women and the use of religious denial as a coping strategy was 9.57 in men compared to 9.09 in women. The only significant differences reported were those to do with religious denial coping strategies in men (t= 2.22, p= 0.03).

Table 5: Independent t-test of coping strategies according to gender

	Gender	N	Mean	Std. Deviation	T	P
Total Coping Scale	Male	167	66.85	10.58	.45	.65
	Female	232	66.37	10.31		
Active avoidance-focused	Male	167	23.41	4.32	-.07-	.94
	Female	232	23.44	4.15		
Problem-focused coping	Male	167	15.36	3.32	.00	1.00
	Female	232	15.36	3.71		
Positive coping	Male	167	14.19	3.18	.60	.55
	Female	232	14.00	3.12		
Religious denial coping	Male	167	9.57	2.35	2.22	.03
	Female	232	9.09	1.99		

***p<0.05, ** p<0.01, *** p<0.001**

Coping strategies and other sociodemographic variables

One-way ANOVA was conducted in which coping strategies were entered as the dependent variable and other sociodemographic variables as the independent variables, e.g. type of university and place of residence. Tukeys post-hoc test showed there were statistically significant differences in active avoidance focused coping strategies according type of university relating to students from Islamic University (F= 2.85, p = .0.03).

Relationship between stress due to the siege and depression, anxiety, and coping strategies

Pearson's correlation coefficient test showed a statistically significant positive relationship between total stress due to the siege and closure and depression symptoms (r =0.32, p<0.01) and anxiety (r= 0.25, p<0.01). These findings suggested that there was a very strong risk factor for being exposed to stress due to siege and blockade with regard to the mental health (depression and anxiety) of Palestinian students in the Gaza Strip.

The correlation test showed that there was a statistically significant negative relationship between total score of stress due to the siege and closure and total coping strategies (r= -0.27, p<0.01), active avoidance focused strategy (r= -0.25, p<0.01), problem- focused coping strategy (r = -0.17, p<0.01), positive coping strategy (r= -0.17, p<0.01), and religious denial coping strategy (r= -0.19, p<0.01). The above-mentioned findings were interesting because they showed that long-standing stressors due to siege and blockade inflicted on the Gaza Strip decreased Palestinian students' coping strategies.

Table 6: Pearson correlation coefficient test between stress, depression and anxiety

	1	2	3	4	5	6	7
1.Total siege							
2. Depression	.32**						
3. Anxiety	.25**	.47**					
4. Total Coping Scale	-.27**	-.15**	-.18**				
5. Active avoidance focused	-.25**	-.27**	-.27**	.78**			
6. Problem- focused coping	-.17**	.04	.01	.74**	.31**		
7.Positive coping	-.17**	-.04	-.08	.77**	.44**	.55**	
8. Religious denial coping	-.19**	-.11**	-.12**	.60**	.37**	.34**	.30**

***p<0.05, ** p<0.01, *** p<0.001**

Discussion

The current study results showed the different types of stressors experienced by university students because of the Gaza siege. The most common types of siege-related stressors were the experience of sharp price increases due to closure as reported by 92% of students; 83.5% said their studies were affected so much due to cut-off of electricity and shortage of gas; 71.4% said their parents had been unable to help in getting fees for the university for themselves and/or siblings due to lack of money. Our results were consistent with previous studies on the impact of siege on Palestinians living in the Gaza Strip.[3,4,5,10] The current study highlights that stressors were more apparent in men than in women. The researcher attributed these differences in stress levels to the role Palestinian men play in relation to work, supporting a wife in future, and the importance of social visits, among other responsibilities, which results in more pressure on men to balance their social and student roles. Nevertheless, the results were contrary to those from a study in India that found stress to all stimuli higher in women. The researcher attributed these differences to the cultural variations within the studies whereby students in India had different social roles in a society where the pressure was greater on women than on men.[11]

The current study also found that 21% of students reported depression with men reporting higher levels of depression than women do. This finding was inconsistent with the results of another study examining the impact of the siege on the mental health, namely anxiety and depression, of university students in the Gaza Strip, which found depression higher in men.[5] The researcher attributed this difference to the chronic, long-term impact of siege along with its devastating effects on every aspect of life with no perceived hope of resolution. The current study results showed that there were no statistically significant differences in depression according to type of university. The researcher attributed these results to the same siege stressors being faced by most of the university students, which can lead to depression.

The current study showed that 24.1% of students reported anxiety-related symptoms. There were no differences in level of reported anxiety according to gender. The rate of anxiety was similar to that of a previous study, which reported the prevalence of severe anxiety among university students as 18.1%.[5] The researcher hypothesized that chronic stressors due to siege will have a lasting effect on people who held little hope that the siege would end. The study results showed statistically significant differences in anxiety levels in students from Al-Quds Open University when compared with students from the other three universities. Such findings could be explained by the fact that those students reported being involved in other activities in life, such as working and had more family responsibilities.

The current study results showed a statistically significant positive relationship between total stress due to the siege and depression symptoms and anxiety. The researcher attributed that to the different effects of siege on all aspects of life, economy, education, and health. Results also showed that the most common coping strategies used by students were finding comfort in religious beliefs, thinking about what steps to take, learning to live with the situation, and asking advice/help from others. The results highlighted statistically significant differences in active avoidance focused coping strategies according to type of university in students from the Islamic University. These results indicate that the university students used emotion focused coping and that this was considered a positive coping strategy, which likely reduced their anxiety, levels. In addition, these results support an earlier study that reported the most common coping strategies used were turning to religion and planning.[10]

Also the results showed a statistically significant negative relationship between total score of stress due to the siege and closure and total coping strategies, active avoidance focused strategy, problem-focused coping strategy, positive coping strategy, and religious denial coping strategy, which means that long-standing stressors due to siege and blockade inflicted on the Gaza Strip decreased Palestinian students coping strategies. Furthermore, the coping strategies used by students were not so effective despite being useful for reducing the accumulated effects of stress on health, which would suggest a need to be changed in order for students to experience a healthier life. An emphasis on the social support role appeared to be effective with coping strategies usually perceived as having a direct effect on families when facing their difficulties even if we observed adjustment problems.[16]

Clinical implications

The results of the current study highlight the need for an immediate end to the Gaza siege. It is clear from our findings that a long-term siege will have lasting, adverse effects on the mental health of the student population. Findings suggest it has already led to students reporting high levels of depression and a decrease in their use of positive coping strategies. Humanitarian organizations should play a more positive role to protect the Palestinian community from the negative consequences of siege. More studies are needed in order to evaluate the impact of the siege on the Palestinian people in all aspects of life. Further, therapeutic interventions are needed to support university students with moderate and severe depression levels. At the very least, awareness workshops for university students can be offered as a way to help them learn more about the psychological consequences arising from their experiences of the siege and the effect it is having on them. Likewise, awareness workshops would benefit community members. Positive coping strategies could also be taught in order to reduce potential psychological problems.

Study limitations

Limitations in the current study include the use of original scoring methods for psychometric scales used in different cultures, which may have resulted in an overestimate of mental health problems.

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الملخص

الهدف: هدفت هذه الدراسة إلى تقيم أنواع ومستويات الضغوط الناتجة عن الحصار على قطاع غزة وأثرها على كل من الاكتئاب والقلق واستراتيجيات التأقلم عند طلبة الجامعات في قطاع غزة. **الطريقة: العينة:** شملت عينة الدراسة 399 طالباً وطالبة ممن يدرسون في الفصل الدراسي الثاني من العام الجامعي 2013-2014 في أربعة جامعات رئيسية هم (جامعة الأقصى، والأزهر، والقدس المفتوحة والإسلامية). واستخدمت الباحثة خمسة مقاييس متلائمة مع أغراض الدراسة وهي (مقياس البيانات الديمغرافية، ومقياس بيك للاكتئاب، ومقياس هاملتون للقلق، ومقياس كارفر لاستراتيجيات التأقلم وأخيراً مقياس الضغوط الناتجة عن الحصار والإغلاق لطلبة الجامعين). **النتائج:** حددت هذه الدراسة أنواع ومستويات كل من الضغوط الناتجة عن الحصار واستراتيجيات التأقلم المستخدمة لدى طلبة الجامعات في قطاع غزة. وكانت الضغوط الأكثر تكراراً هي (92%) قالوا إن الأسعار ارتفعت بسبب الإغلاق، و(83.5%) قالوا بأن دراستهم تأثرت كثيراً بانقطاع التيار الكهربائي. أظهرت نتائج هذه الدراسة بأن هناك فروق ذات دلالة إحصائية هامة بين مجموع الضغوط الناتجة عن الحصار باتجاه الذكور حيث المتوسط 12.38 بينما المتوسط في مجموع الضغوط الناتجة عن الحصار لدى الإناث بلغت 10.33. وأكثر من ذالك فإن هناك فروق ذات دلالة إحصائية في الضغوط الناتجة عن الحصار لصالح الذكور. أظهرت النتائج أيضا بأن 9.5 % من الذكور , 12% من الإناث لديهم اكتئاب شديد، و10.3% من الذكور، 13.8 % من الإناث لديهم قلق شديد، بينما لم تظهر النتائج أي فروق في الاكتئاب والقلق حسب الجنس. أظهرت نتائج الدراسة أنه يوجد علاقة ايجابية إحصائية هامة بين مجموع الضغوط الناتجة عن الحصار والاكتئاب والقلق كانت استراتيجيات التأقلم الأكثر تكرارا عن طلبة الجامعات هي (78.2%) يجدون الراحة في المعتقدات الدينية، و(67.7%) يفكرون فيما الخطوات التي تأخذ، و (71.4%) يتعلمون التعايش مع الوضع. ولا يوجد فروق ذات دلالة إحصائية بين الذكور والإناث استراتيجيات التأقلم، ووجدت علاقة سلبية إحصائية هامة بين مجموع الضغوط الناتجة عن الحصار واستراتيجيات التأقلم. **الخلاصة والتوصيات:** خلصت هذه الدراسة إلى أن الحصار المفروض على غزة له آثار سلبية طويلة الأجل على الفلسطينيين وزاد من معدل المشاكل الصحية النفسية لدى طلاب الجامعات وأدى ذلك إلى استخدام استراتيجيات تأقلم لسلبية لمواجهة الضغوط الناتجة عن الحصار. ينبغي على المنظمات الإنسانية أن تلعب دورا أكثر إيجابية لحماية المجتمع الفلسطيني من الآثار السلبية للحصار. ويلزم المزيد من الدراسات حول تأثير الحصار على الشعب الفلسطيني في جميع مناحي الحياة. أيضا، يجب توفير برامج للتدخلات العلاجية النفسية لطلاب الجامعات الذين يعانون من الاكتئاب المعتدل والشديد.

كلمات مفتاحية: الحصار، الضغوط النفسية، القلق، الاكتئاب، استراتيجيات التأقلم، طلاب الجامعات، قطاع غزة.

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Anxiety and Depression in Female Patients with Breast Cancer: A Study of Predictors

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القلق والاكتئاب في المرضى الإناث اللاتي تعاني من سرطان الثدي: دراسة المنبئات

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Abstract

Background: Cancer diagnosis and its treatments are recognized to be stressful, which raises the need for identifying its psychological sequelae, such as anxiety and depression in the vulnerable patients**. Objectives:** The aim was to study the psychosocial, clinical or biological factors, which predict the development of depression and anxiety in female patients diagnosed with breast cancer. **Method:** This is a cross sectional study of 104 female patients newly diagnosed with breast cancer before surgery. Clinical and Immunohistochemical analyses were done to detect the presence of estrogen, progesterone and HER2/neu receptors. The following scales were applied: the Hospital Anxiety and Depression Scale, Social Readjustment Rating Scale, Rotter's Internal and External Locus of Control and MOS Social Support Scale. **Results:** Predictors for depression were external locus of control, high education, lymph node (LN) status and tumor grading (beta= 0.346, 0.498, 0.256, 0.186 respectively) while predictors for anxiety were high education, tumor size and HER2/neu receptors (beta=0.233, 0.271, -0.260 respectively). **Conclusion:** Some biological and psychological factors can predict the development of depression and anxiety in breast cancer patients; therefore, early intervention can improve the mental health of those patients.

Key Words: depression, anxiety, breast cancer, estrogen receptors, locus of control

Declaration of interest: None

Introduction

Breast cancer has one of the highest five-year survival rates among female malignancies; it ranges between 80% and 95%[1]. Diagnosis of breast cancer might no longer be regarded as fatal, but has been increasingly acknowledged as treatable. Breast cancer is particularly important because it has specific challenges for women due to its impact as a life-threatening disease, its intensive surgical and medical treatments. There are also changes in sexuality, femininity, body image and maternal issues after mastectomy, removal of an important cultural symbol of femininity and an intimate part of the patient's self-esteem. Consequently, the afflicted women may face psychiatric co-morbidity with this new life situation.[2] Nevertheless, cancer diagnosis and its treatment are recognized to be stressful times that raise the need for clinicians to actively identify its psychological sequelae, such as depression and anxiety in vulnerable patients. Early detection and treatment of depression and anxiety in breast cancer sufferers does not only significantly improve their quality of life, but also increases their survival rates.[3]

Studies over the past 30 years that examined the relationship between psychological factors, including stress and cancer risk with subsequent depression or anxiety, have produced conflicting results.[4] Although the results of some studies have indicated a link between various psychological factors and an increased risk of developing cancer, a direct cause-and-effect relationship has not been proven[5]. Psychosocial variables and their relationship to cancer incidence and progression are discussed in several reviews[6,7]. The question of whether psychosocial parameters could have an effect on the clinical outcome of cancer in general has yielded a large body of research devoted to this issue and has divided the medical community into believers and non-believers. The plausibility of a stress-breast cancer association stems from two important

physiological and biological roles of the stress hormone cortisol. As cortisol plays an essential part in mammary gland development and function, which may sensitize mammary tissues to modulations in cortisol signaling in the presence of stress, it also has an impact on certain aspects of estrogen activity in the mammary gland, which may initiate pro-tumorigenic changes during periods of stress.[8]

Depression in cancer patients usually affects many bodily functions such as endocrine and immune functioning, which persistently activate the hypothalamic-pituitary-adrenal (HPA) axis. Activated HPA axis affects and compromises immune surveillance of tumors and resistance to cancer progression. It is believed that the main link between depression and cancer in general is immune dysregulation. In cancer, cytokines are locally produced in the brain, and become mediators of neurologic manifestations. They may have a direct effect on brain mechanisms (by altering neuronal processes) or indirect (by altering brain chemistry).[5] Depression usually is associated with non-disclosure of cancer diagnosis.[9] Moreover it leads to poor adherence to medical treatment and lower quality of life.[10]

Anxiety levels fluctuate over the course of treatment and tend to be the highest during diagnostic work-up and towards the end of treatment. Extensive disease and pain are associated with higher prevalence of anxiety.[11] Generally, anxiety levels heighten before surgery and abate thereafter, implying that patients view surgery as a short-term threat.[12] Prolonged anxiety has immunosuppressive effects, compromises the patient, and may impair the level of cognitive functioning when important health decisions must be made.[13]

Different researches have focused on the relationship between psychosocial variables such as stress, social support and the development of depression or anxiety with disease progression. However, little is known about which of them most probably leads to the development of depression or anxiety. On the other hand, some clinical and biological factors may have a role also in developing depression and anxiety in that group of patients.[14]

The present study aimed to obtain data relevant to the assessment of psychiatric morbidity among some Egyptian patients recently diagnosed as having breast cancer in comparison to healthy controls from the same population and to detect different psychosocial, clinical, biological factors that can predict the development of depression and anxiety in breast cancer patients to improve their mental health.

Methods

The present study was done at the Mansoura University Oncology Centre, which promotes services to cancer patients from all Delta regions. It provides both surgical intervention and medical follow up. It was a cross-sectional study conducted at the Surgical Oncology unit in the Oncology Centre of Mansoura University from May 2012 to May 2013. A convenience sample, comprising all patients who were admitted to the Oncology Centre to be subjected for surgery, was examined for the patients' suitability to participate in the study by applying the inclusion and exclusion criteria. The control group comprised 99 healthy females, selected from hospital employees in Mansoura Hospital, with no personal or family history of psychiatric disorders. One hundred and four female patients diagnosed with breast cancer were recruited for the study before entering surgery. Written informed consent was obtained from the patient to join the study after ethical approval and in accordance with the Helsinki Declaration of 1975, as revised in 2000. Inclusion criteria were: (i) having been diagnosed with breast cancer, (ii) no longer receiving any treatment such as surgery, chemotherapy or radiotherapy. One hundred and thirty five patients met the inclusion criteria, among them, 31 refused to join the study. The exclusion criteria were cases of mental retardation; medical or neurological problems; patients known to have primary major psychiatric disorders before breast cancer was diagnosed; hearing or visual disability; and history of recent substance abuse.

Clinical examination, radiological, pathological investigations were done to detect lymph node status (LN), tumor grade, TNM staging for tumor where T for tumor size, N for lymph node, M for metastasis and presence of loco-regional recurrence.

- Immunohistochemical analysis for detection of the presence of estrogen receptors (ER), progesterone receptor (PR) and HER2/neu (human epidermal growth factor) receptor status on the surface of the tumor.

All patients in the present study were assessed on their sociodemographic profiles, clinical history, interviewed using the Arabic version of the Mini International Neuropsychiatry Interview[15] and diagnosed according to Diagnostic and Statistical Manual of Mental Disorders (DSM-IV) criteria.[16] Assessment of socioeconomic standard was done using the Egyptian classification of socioeconomic standard of Fahmy and El-Sherbini.[17]

Psychiatric assessment and evaluation by the following scales:

- Hospital Anxiety and Depression Scale (HADS).[18] The instrument was designed for medically ill patients and does not include physical symptoms. It has been validated in patients with cancer.[19] Arabic version was used to report anxiety and depressive symptoms.[20]
- The Social Readjustment Rating questionnaire (SRRS):[21] it is used to quantify the impact of life events stresses. It is a self-administered questionnaire. The SRRS consists of a list of 43 happenings to which subjects are asked to assign weights using an open ended scaling procedure with the message item arbitrarily assigned a weight of 500 as an anchor point. The Egyptian version of the scale, termed the Social Readjustment Rating Scale (SRRS) was designed by Okasha et al. (1981) to quantify the degree of adaptation required by diverse life events, so a certain number of scores could be for each unit, which thus becomes specific for Egyptian.[22]
- Rotter Internal-External Locus of Control Scale (I-E) was used to measure locus of control. The measure consists of 29 pairs of questions of which 23 items are measuring locus of control and the remaining six are fillers unrelated to locus of control.[23] The Arabic version used in the present study was translated and validated.[24]
- MOS social support:[25] it is administered to evaluate recent thinking about various dimension of social support irrespective of the source. It is a brief 20-items self-report scale for adult patients with chronic conditions. The scale was translated into Arabic, back translated into English and then retranslated into Arabic. The reliability during a short retest interval (several days) was reported to be 0.85, where the Cronbach's alpha coefficient for the subscales ranged between 0.524 and 0.872 and for the entire scale was 0.725.

Statistical analyses

Data were entered into the Statistical Package for the Social Sciences, Version 12.0 (SPSS, v12.0) and were analyzed using descriptive and analytic analyses including frequencies, mean and standard deviations, t-test, and chi-square test for comparison of quantitative and qualitative variables, respectively. Pearson correlation coefficients were used to detect associations between variables. A p value of < 0.05 was considered significant in all analyses. Stepwise regression analysis was used to determine which of the social factors or biological factors were independently associated with depression and anxiety.

Results

Table 1 summarizes the demographic data of the patients and control groups with no statistically significant difference.

Regarding the clinical and tumor variables, 69(66.3%) were of grade II, fewer were of grade III 26 (25%), while the majority of them were between T2 and T3 (76%), N1 and N2 (68.3%), fewer were of T4 (13.5%), N3 (18.3%). Only 12 (11.5%) had metastasis, 2 (1.9%) had

recurrent disease.

After conducting the interviews and applying DSM-IV criteria, it was found that 43.3% (45) had adjustment disorder with mixed depression and anxiety, 28.8% (30) had major depressive disorder versus none in the control; 23.1% with generalized anxiety disorder compared to four females only in the control group (P< 0.001). Panic disorder was present in two patients (1.9%) versus none in the control group.

Table 1: Cross-tabulation of socio demographic factors among participants in the control and the study group

	Patients (n=104)	**Control (n=99)**	**x^2**	**P**
Age	51±14.8	50.8±14.8	t=1.012	.314
Marital status				
Never married	6	5	.091	.763
Married	61	63	.032	.857
Widow	33	28	.410	.522
Divorced	4	3	.143	.705
Residence				
Urban	20	24	.364	.546
Rural	84	75	.400	.527
Social class				
Very low	9	7	.250	.617
Low	66	56	.820	.365
Middle	29	36	.754	.385
High	0	0		
Education				
<12 years	70	65	.185	.667
>12 years	34	34		

*Significant p<.05

As regard the results of Immunohistochemical analysis, 65.4% were positive for estrogen receptors and 61.5% for progesterone receptors while 32.7% were positive for HER2/neu receptors.

Table 2 reveals that patients having estrogen receptors had significantly higher depression scores (t= 2.285, p=.027*) than those who did not, while there was no significant statistical difference regarding anxiety (t=1.276, p=.210).

Table 2: Depression and anxiety levels in relation to estrogen receptors

	Patients with +ve Estrogen receptors	**Patients with –ve Estrogen receptors**	**T**	**P**
	Mean ± SD	Mean± SD		
Depression	11.2 ± 0.4	10.2 ± 0.4	2.285	.027*
Anxiety	11.6 ± 3.1	10.9 ± 2.5	1.276	.210

*Significant p<.05 **highly significant p<.01

Correlation studies shown in Table 3 revealed that locus of control is significantly correlated (r= .350**)

with depression while social interaction was negatively correlated (r= -.215*).

Table 3: Correlation between some psychosocial factors and each of depression and anxiety

	Depression (r)	Anxiety (r)
Social readjustment	.159	-.031
Locus of control	.350**	.020
Social interaction	-.215*	.051
Affectionate support	-.101	.083
Practical support	-.003	-.105
Emotional support	-.105	.095

*Significant p<.05 **highly significant p<.01

Stepwise regression analysis as observed from Table 4 and Table 5 revealed that from psychological factors, external locus of control and educational level were significant (beta=.346, beta=.498) respectively. Biological predictors for anxiety were tumour size (beta=.271) and HER2/neu receptors (beta=-.260), while only education among other psychological factors was found to be significant (beta=.233).

Table 4: Stepwise regression analysis for biological, psychosocial factors and depression

	R square	Beta	T value	Significance
Education	.344	.498	5.414	.000**
Locus of control		.346	3.800	.000**
L N status		.256	2.939	.004**
Grading		.186	2.116	.037*

*Significant p<.05 **highly significant p<.01

Table 5: Stepwise regression analysis for biological, psychosocial factors and anxiety

	R square	Beta	T value	Significance
Education	.192	.233	2.409	.018*
T (tumor size)		.271	2.820	.006**
HER2/neu		-.260	-2.710	.008**

*Significant p<.05 **highly significant p<.01

Discussion

Our results showed that 43.3% of patients had adjustment disorder and 28.8% had major depressive disorder while 28.8% had mild anxiety symptoms, 23.1% with generalized anxiety disorder, 1.9% had panic disorder. Nearly similar results were found in Egyptian studies, that revealed anxiety disorders and mood disorders to be the most prevalent diagnoses among breast cancer patients.[26,27] Other studies reported that the prevalence varied between 10% and 25% being higher at diagnosis.[28,29] A recent study reported that prevalence of depression was 46% and anxiety 48%.[30] High prevalence of depression among Arab women who became breast cancer patients could be explained as they face two major threats. The first threat concerns the woman's life, breast cancer being the second most common cause of cancer death among women.[31] The second threat concerns her psychological image as a competent woman, particularly in relation to sexuality, femininity, body image, and maternal issues. This image can be significantly altered after surgical excision of this commonly accepted cultural symbol of femininity.

Therefore, it is quite common that a significant proportion of breast cancer patients experience psychiatric morbidity.[32, 33]

As observed, patients with positive estrogen receptors had significantly higher depression score compared to an estrogen receptor negative group. Similar findings were obtained in a recent study that clarify that estrogen receptor status may be related to the severity of certain aspects of depressive symptoms and can lead to poor quality of life. Thus, implying a role for the estrogen receptors in affective and behavioral regulation as estrogen is a well-known prognostic factor in breast cancer.[34] Some breast cancer cells are more sensitive to estrogen than others: they have a relatively large quantity of a particular type of estrogen receptor; these cells are called estrogen-dependent or estrogen-receptor positive. There are two distinct estrogen receptors that estrogen hormones bind on breast cells: estrogen receptor alpha and few estrogen receptor beta.[35] The binding of estrogen hormones to estrogen receptor alpha promotes breast cell proliferation, which can lead to breast cancer development. Conversely, the binding of estrogen hormones to estrogen receptor beta inhibits breast cell proliferation and prevents breast cancer development.[36] Genetic variation in the estrogen receptors may therefore modify estrogen signaling, thus influence a woman's susceptibility to developing depression. Accumulating evidence suggests the involvement of estrogen in depression, as estrogen can modulate neurotransmitter turnover. It enhances the levels of serotonin and norepinephrine and is involved in the regulation of serotonin receptor number and function, thus controlling the activity of serotonergic neurons.[37] However, anti-estrogen treatments such as Tamoxifen, which is used for treatment, and prophylaxis of hormone-sensitive breast cancer has been associated with depression.[38]

Among different psychological factors, external locus of control was highly significantly correlated with depression. This could be explained by the fact that the traditional Arab view that health and illness depend on God's will, or on fate, is deeply rooted in the Arab society and may explain the higher external locus of control. It has even been argued that these beliefs are not directly related to level of education or religiosity as Al-Krenawi and Graham, 2000 asserted that Arab people tend to perceive forces outside the individual as causing illness, thus expressing higher external locus of control. Religiosity may entail faith-based coping and belief in the power of praying (internal locus),but it may involve belief in a higher power, thus fostering a passive attitude (external locus).[39] A previous study found that people with higher age, and having lower education had higher external locus of control. People with an external locus of control tend to be more stressed and prone to clinical depression.[40]

Regarding the results of social support, it was observed that the social interaction was negatively correlated with depression. Poor social support was reported to have a significant association with depression.[41] It was found that social support provided by the families and friends of the cancer-diagnosed patients is associated with positive outcomes in the course of the disease by affecting general wellbeing of the cancer patients. Assistance with daily life is an important element of the endeavor to reduce and compensate for the disadvantages that result from cancer and therapies.[42,43] While reduced social interaction could be regarded to be resulting from depression or the cause of depression, e.g. cause and effect relationship; as depression is usually associated with decreased social interaction as a result of social withdrawal or limited social relation and support because of illness that can lead to depression.

Higher education was found to be a predictor of depression and anxiety. This was consistent with the study made by Fafouti et al., 2010 who found that highly educated women are more likely to become anxious.[32] Also, supported by Hadi et al., 2009 and Akin-Odanye et al., 2011, who supposed that the more educated an individual is the better able she will be in sourcing information about a variety of issues including health related breast cancer.[2,44] It was observed that lower education was considered protective from anxiety and

depression. While this was contradicted by other studies which reported that depression was associated with lower education.[45,46] Another study reported no association between any of the psychosocial factors and depression.[47] This could be due to different sampling and methodology.

The finding that cancer grade and LN status predicted depression is supported by previous studies (Hsu et al., 2010, Akin-Odanye et al., 2011) as advanced disease is a risk factor for depression.[47,44] This is likely to be so because having advanced cancer is often associated with increased level of pain and higher level of existential concerns related to fear of death.

Tumour size was found to be one of the predictors of anxiety, this was supported by a previous study that confirmed that anxiety appears to increase as illness progresses; therefore, more extensive disease is associated with higher prevalence of anxiety that may lead to increased mortality.[48] On the other hand, this was contradicted by a another study which reported that disease stage predicts post-diagnosis anxiety and depression only in some types of cancer not including breast cancer and that cancer type may exert a strong influence on the relationship between disease stage and anxiety or depression.[49]

It is well known that when cancer cells make too much of a protein known as HER2/neu, these breast cancers tend to be much more aggressive and fast growing. In the present study, it was found to be a negative predictor for anxiety, which was not found in previous studies that could shed light on the need for more in-depth studies for more clarification of this relation.

Limitations

The sample size of our study was small which does not allow for a precise analysis of different factors that can predict development of depression and anxiety in breast cancer patients.

The present study was cross-sectional, and therefore could not show the causal relationships. A longitudinal study would be better to confirm the causal relationship among variables.

Considering these limitations, the findings may be biased and may be difficult to generalize in other patient populations except after more in depth studies considering these preliminary results.

Conclusions and Recommendations

- The results of the present study replicated the importance of some psychosocial factors namely education and external locus of control in the prediction of depression in breast cancer patients. Furthermore, some biological factors seem to be important particularly estrogen receptors, tumor stage and grading which shed light on a relatively neglected area of a shared biological pathway between psychiatric disorders (particularly depression and anxiety) and malignancy.
- Further studies of these later factors can illuminate dark points in the pathogenesis of depression in breast cancer patients.
- Specific programs should be applied on dealing with breast cancer patients for prediction and early identification of factors that can lead to the development of depression and or anxiety to promote mental health and prevent its consequences.

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الملخص

الخلفية: إن تشخيص السرطان وعلاجاته يسبب الإرهاق ويؤكد على الحاجة لتحديد العواقب والآثار النفسية مثل القلق والاكتئاب. وقد كان الهدف من البحث هو التوصل إلى أي العوامل البيولوجية السريرية أو النفسية التي يمكنها التنبؤ بحدوث الاكتئاب والقلق. الأدوات والطرق: أجريت الدراسة في مركز الأورام على مائة وأربع مريضات أصبن حديثا بسرطان الثدي قبل التدخل الجراحي أو الدوائي. وقد اجري لهم فحص سريري وتحليل المناعة النسيجية للكشف عن وجود مستقبلات هرمونا الاستروجين، البروجستيرون ومستقبلات **HER2/neu**وتم عمل المقاييس التالية: مقياس المستشفى للقلق والاكتئاب، مقياس إعادة التكيف الاجتماعي، مقياس روتر لموضع السيطرة الداخلية والخارجية ومقياس حجم الدعم الاجتماعي لموس. وتم تحليل النتائج وتوصلنا إلى أن منبئات الاكتئاب كانت موضع السيطرة الخارجي وارتفاع مستوى التعليم وارتفاع درجة إصابة الغدد الليمفاوية (بيتا0,498 ,0,256,0186, 0,346)، في حين أن منبئات القلق كانت ارتفاع مستوى التعليم وحجم الورم ووجود مستقبلات) **HER2/neu**.بيتا =0,233 ,0,271، -0,260) مم نخلص إلى أن وجود تلك العوامل قد ينبئ بحدوث الاكتئاب والقلق في مريضات سرطان الثدي وان التدخل المبكر لعلاج هؤلاء المرضى يؤدى إلى صحة نفسية أفضل.

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Social Anxiety Symptoms and Their Relation to Anxiety Sensitivity, Shame and Intolerance of Uncertainty in a Sample of Lebanese College Youth

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أعراض القلق الاجتماعي وعلاقتها بحساسية القلق، والعار، والتّوتر من عدم اليقين في عيّنة من طلاّب جامعيين لبنانيين

تينا صحاكيان وشاهي كازاريان

Abstract

Objectives: The present study examined social anxiety symptoms in relation to concern about anxiety, proneness to shame, and the tendency to react negatively to uncertain situations in a group of college youth. **Method:** A total of 300 university students (51.9% women) completed the Arabic translated version of the Social Anxiety Questionnaire for Adults (SAQ-A30), the Anxiety Sensitivity Index-3, the Self Shame Scale and the Intolerance of the Uncertainty Scale. **Results:** The Arabic SAQ-A30 derived social anxiety symptoms scores were correlated with the demographic factors of age and gender as well as the three risk factors of anxiety sensitivity, shame and intolerance to uncertainty. Social anxiety symptom scores were not related to the demographic factors of age or gender. On the other hand, social anxiety symptom scores correlated positively with anxiety sensitivity ($r = .47$, $p<.001$), intolerance of uncertainty scores ($r = .43$, $p<.001$), and shame scores ($r = .36$, $p<.001$). **Conclusion:** The findings highlight the pertinence of anxiety sensitivity, shame and intolerance of uncertainty to social anxiety symptoms in college youth and their potential as targets for intervention.

Key words: Social anxiety symptoms, anxiety sensitivity, shame, intolerance of uncertainty, Lebanese college youth

Declaration of interest: None

Introduction

Social anxiety is the disabling fear and avoidance of social and performance situations. The socially anxious individual fears being noticed by others or being the target of their scrutiny as well as doing anything that may be construed as shameful or giving a bad impression to others. Consequently, the socially anxious person avoids social and performance situations in which embarrassment, negative evaluation or criticism are likely to occur.[1] Social anxiety symptoms usually occur in early adolescence and young adulthood[2] and are found in college youth in different Arab countries such as Egypt,[3,4] Iraq,[5] Jordan,[2] Oman,[6] and Syria[7] with prevalence rates of 9.1% for college youth in Jordan; 13% for college youth in Egypt; 30% for third year medical students at the Ain Shams University in Cairo, Egypt; and 54% for college youth in Oman. University students with high social anxiety symptoms tend to show poor academic performance and peer relations, low self-esteem, risk for substance use, vulnerability to psychological and psychiatric dysfunctions, and diminished quality of life.[2, 5, 8]

The limited studies on social anxiety symptoms in students in the Arab world have relied on different assessment approaches including interview protocols, such as the Arabic version of the Present State Examination[9] and a number of Arabic versions of self-report measures such as the Social Phobia Inventory,[2,10] the modified Reactions to Social Situations Scale,[11] and the Social Interaction Anxiety Scale.[5,12]

In the present study, we translated into Arabic the psychometrically robust Social Anxiety Questionnaire for Adult (SAQ-A30)[13,15] to examine the relation of Arabic SAQ-A30 derived social anxiety symptoms scores to the demographic factors of age and gender as well as the three theoretically and empirically grounded risk factors of anxiety sensitivity, shame, and

intolerance of uncertainty in a sample of Lebanese college youth.

Anxiety sensitivity was chosen as a risk factor of social anxiety symptoms on the theoretical ground that individuals vary in their concern about anxiety symptoms; fear of physical sensations, loss of cognitive control, and socially observable symptoms of anxiety, as well as the negative consequences of experiencing anxiety symptoms in social and performance situations such as embarrassment and social rejection.[16] More specifically, it is posited and supported empirically that individuals who experience social anxiety symptoms in comparison to those who do not are more sensitive to anxiety invoked sensations and symptoms and more fearful of the consequences of appearing anxious or behaving in an anxious manner in social and performance situations.[16] As such, we expected self-reported anxiety sensitivity to correlate positively with social anxiety symptoms.

Similarly, shame was selected as a correlate of social anxiety symptoms on the theoretical ground that individuals vary in their proneness to shame.[17,18] More specifically, it is posited and empirically supported that individuals with social anxiety are socialized and moralized through physical punishment to feel shame when they fail to conform or adhere to moral codes, social conventions, social expectations, and social rituals, e.g., manner of greeting, sitting, and making a conversation; to fear criticism from others, and to avoid social and performance situations for fear of bringing shame on themselves.[17,18] Proneness to shame has been found to be associated with social avoidance, fear of negative evaluations and interaction anxiety.[19] Moreover, shame has been found to be elevated in individuals who experience social anxiety symptoms in comparison to those who do not.[20] As such, we hypothesized self-reported shame to correlate positively with social anxiety symptoms.

Finally, intolerance of uncertainty was considered as a risk factor of social anxiety symptoms on the theoretical ground that individuals vary in their tendency to react negatively to social and performance situations that are uncertain.[21,22] It is posited that individuals with social anxiety are socialized through harsh and overprotective parenting to avoid uncertainties and fear negative outcomes in social and performance situations.[23] In relation to college youth, we reasoned that college youth with social anxiety symptoms are more likely to be distressed and worried over uncertainties associated with the transitional nature of college life such as entirely new social situations, e.g. social contacts, authority figures, individuals with differing cultural norms and beliefs and novel academic performance expectations and outcomes, including participation in class discussions and making public presentations. As such, in the present study we expected intolerance of uncertainty to correlate positively with social anxiety symptoms.

Method

Participants and procedure

A total of 300 Lebanese youth (51.9% women) from the American University of Beirut, a private institution of higher learning, participated in the present study. Participants were between the ages of 18 and 25 with a mean age of 19.99 years (SD=1.83). Using convenience sampling, participants were recruited from introductory psychology courses and the university campus generally. The students of the introductory psychology courses received an announcement of the research study. To participate in the study, interested students were instructed to take an appointment with the researchers during which they were presented with the consent form and the questionnaire battery. Upon participation, they received course credit for their involvement in the study. Participants were also recruited from the university campus. Students were approached, told about the study and if interested were presented with the consent form and questionnaire battery.

The questionnaire battery included a consent form, a demographic sheet, and the Arabic versions of the Social Anxiety Questionnaire for Adults[13] (Arabic SAQ-A30), the Anxiety Sensitivity Index-3[24] (Arabic ASI-3), the Self-Shame Scale[25] (Arabic SSS), and the Intolerance of Uncertainty Scale-Short Form[26] (Arabic IUS-12). All four measures were translated into Arabic using translation and back-translation methodology involving three bilingual translators. The involvement of a professorial faculty member from the Department of Arabic and Near Eastern Languages of the American University of Beirut to reconcile discrepancies was also sought as necessary. Measures were administered in a counterbalanced order to minimize order effects.

Instrumentation

Arabic version of the Social Anxiety Questionnaire for Adults (Arabic SAQ-A30)[13]

The Arabic SAQ-A30 is a 30-items measure of social anxiety symptoms. The items tap unease, stress or nervousness in such social situations as speaking in public, talking with people in authority, interacting with the opposite gender and strangers, assertive expression of annoyance, disgust or displeasure, and being criticized and embarrassed. Each item is rated on a 5-point Likert scale (1= Not at all or very slight, 5= Very high or extremely high), with higher scores reflecting more social anxiety symptoms. In the present study, the internal consistency of the Arabic SAQ-A30 was α = .91.

Arabic version of the Anxiety Sensitivity Index-3 (Arabic ASI-3)[24]

The Arabic ASI-3 is an 18-items measure of the tendency to fear anxiety symptoms under the conviction that they have negative consequences, such as considering it important not to appear nervous, worrying that others will notice one's anxiety, and worrying that one is choking to death when feeling tight in the throat. The items tap into fears of physical sensations, loss of cognitive control, and socially observable symptoms of anxiety. Each of the items requires a rating from 0 (Very little) to 5 (Very much); higher scores indicating higher anxiety sensitivity. In the present study, the internal consistency of the Arabic ASI-3 was α=.87.

Arabic version of the Self-Shame Scale (Arabic SSS)[25]

The Arabic SSS is a 5-items measure of shame in which respondents are instructed to imagine how they would feel if they were anxious or behaved in an embarrassing manner in a social situation. It includes items such as seeing oneself as a failure or as inferior when anxious or behaving in an embarrassing manner in a social situation. The SSS is a modified version of the internal shame subscale of the Attitudes Towards Mental Health Problems Scale. Each of the items of the Arabic SSS requires a 3-point rating (0 = Do not agree at all, 3= Completely agree); higher scores indicating higher endorsement of shame. In the present study, the internal consistency of the Arabic SSS was α=.76.

Arabic version of the Intolerance of Uncertainty Scale-Short Form Scale (Arabic IUS-12)[26]

The Arabic IUS-12 is a 12-items measure of fear and avoidance of uncertain situations such as being greatly upset by unforeseen events, having to get away from uncertain situations, and being paralyzed by uncertainty. Each item is rated on a 5 point Likert scale from 1 (Not at all characteristic of me) to 5 (Entirely characteristic of me); higher scores indicating higher intolerance of uncertainty. In the present study, the internal consistency of the Arabic IUS-12 was α=.87.

Results

Social Anxiety, Anxiety Sensitivity, Intolerance of Uncertainty and Shame: Descriptive

The means and standard deviations of the Arabic versions of the SAQ-A30, ASI-3, SSS and IUS-12 scales are provided in Table 1.

Table 1: Means and standard deviations of Arabic SAQ-A30, ASI-3, SSS and IUS-12 scales

	N	Mean	Std. Deviation
Arabic SAQ-A30	291	2.75	.63
Arabic ASI-3	290	1.20	.72
Arabic SSS	291	.74	.57
Arabic IUS-12	290	2.58	.76

As can be seen, Lebanese college youth in the present sample rated their social anxiety symptoms and intolerance of uncertainty below the mid-point, suggesting that they experience moderate levels of overall anxiety symptoms in social and performance situations and moderate fear and avoidance of uncertain situations. Anxiety sensitivity and shame were similarly in the low to moderate range, suggesting that as a group, the Lebanese college youth were not excessively troubled by shame nor fear of anxiety related sensations and arousal.

Social Anxiety and Demographics

Arabic SAQ-A30 derived social anxiety symptom scores did not correlate with age (r= -.09, ns). Comparisons of gender also failed to show differences between men and women on social anxiety symptoms (M= 80.60, SD= 18.45 and M= 82.60, SD= 19.58, respectively, t (282) = .45, ns), suggesting the possible independence of social anxiety symptom scores from age and gender.

Correlations of Social Anxiety with Anxiety Sensitivity, Shame and Intolerance of Uncertainty

As can be seen in Table 2, social anxiety symptom scores correlated with anxiety sensitivity scores (r= .47, p<.001), intolerance of uncertainty scores (r= .43, p<.001), and shame scores(r= .37, p<.001).

Table 2: Inter-correlation of the Arabic SAQ-A30, ASI-3, SSS and IUS-12 scales

	Arabic SAQ-A30	Arabic IUS-12	Arabic ASI-3	Arabic SSS
Arabic SAQ-A30	1.00			
Arabic IUS-12	.43**	1.00		
Arabic ASI-3	.47**	.47**	1.00	
Arabic SSS	.37**	.40**	.33**	1.00

**. Correlation is significant at the 0.01 level (2-tailed).

As can be seen in Table 3, hierarchical multiple regression analysis showed anxiety sensitivity as the best predictor of social anxiety symptoms (R2= 0.22, F (1, 288) = 82.00, p<0.001; β= .31, p<.001) followed by intolerance of uncertainty (R2=0.06, F (1, 288) = 22.92, p<0.001; β= .21, p<.001) and shame(R2=0.03, F (1, 288) = 10.92, p<0.001; β= .18, p<.001).

Table 3: Regression parameters

Model		Standardized Coefficients Beta	Sig.
1.00	(Constant)		.00
	Arabic ASI-3	.47	.00
2.00	(Constant)		.00
	Arabic ASI-3	.34	.00
	Arabic IUS-12	.27	.00
3.00	(Constant)		.00

	Arabic ASI-3	.31	.00
	Arabic IUS-12	.22	.00
	Arabic SSS	.18	.00

Discussion

The present study was the first to examine social anxiety symptoms and their risk factors in a sample of Lebanese college youth. Participants reported experiencing moderate levels of social anxiety symptoms and intolerance of uncertainty and moderate to low levels of anxiety sensitivity and shame. Age and gender were not related to social anxiety symptoms. The lack of a gender difference in social anxiety symptoms is surprising and contradictory to the literature.[14] The finding suggests that in the current sample male and female college youth feel comparable levels of social anxiety in their adherence to moral codes and social rituals or in their sensitivity to making bad impressions in social and performance situations.

In the present study, anxiety sensitivity, shame and intolerance of uncertainty correlated significantly with social anxiety symptoms. These findings are consistent with findings reported in the Western literature,[16,18,23] and invoke two possible explanations. One possible explanation is that symptoms of social anxiety in youth increase their proneness to anxiety sensitivity, proneness to shame and intolerance of uncertainty. Alternatively, college youths' concern about anxiety symptoms as well as proneness to shame and negative reactions to situations that are uncertain contribute to and intensify their experiences of social anxiety symptoms. In view of the correlational nature of the present study, neither explanation could be ruled out. The findings support the literature on the presence of a unique relationship between anxiety sensitivity, shame, intolerance of uncertainty and social anxiety symptoms. The literature, however, also points to the contribution of these variables to the anxiety spectrum.[27,30,31] Anxiety sensitivity has been associated significantly with symptoms of panic disorder and agoraphobia, generalized anxiety disorder, social anxiety disorder, post-traumatic stress disorder and, obsessive-compulsive disorder suggesting its role as a vulnerability factor associated with anxiety[27] and a risk factor to anxiety disorders.[28] Intolerance of uncertainty has also been related to symptoms of obsessive-compulsive disorder, pathological worry, social anxiety, panic disorder, and generalized anxiety disorder suggesting that it is a trans-diagnostic maintaining factor of anxiety.[29,30] Shame proneness has also been significantly associated with symptoms of generalized anxiety disorder, obsessive-compulsive disorder and social anxiety disorder with changes in shame proneness associated with changes in the symptoms of these disorders.[31] Thus, the possibility that anxiety sensitivity, shame and intolerance of uncertainty might contribute to a broad spectrum of the anxiety experience of worrying with unpleasant expectations in addition to social anxiety symptoms specifically must also be considered.

While regression analysis supported the detrimental nature of all three factors in that they contributed to the experience of social anxiety symptoms, anxiety sensitivity nevertheless stood out as the strongest predictor of social anxiety symptoms followed by intolerance of uncertainty and proneness to shame. One possible explanation for shame being least detrimental to symptoms of social anxiety in the present sample of college youth is that the sense of shame experienced by college youth in social and performance situations is not as threatening to their social interactions as are their concerns about experiencing anxiety symptoms or their negative reactions to the uncertainty of social and performance situations. It would seem that college youth by virtue of their socioeconomic and educational advantage may be less restrained or inhibited by shame and as such are more willing to challenge social norms to buttress their sense of autonomy and individuality.

The findings of the present study must be considered in light of some limitations. The instruments used to

measure the variables of interest were translated to Arabic for the purpose of this study and require further validation. A socially anxious clinical sample was not included for comparative analysis, and a comparative analysis of the results within the study sample was not done due to the large discrepancy in the number of participants who would be divided into the low versus high social anxiety symptoms groups. The study is also limited by its correlational and cross-sectional methodologies and its sole reliance on self-report measures.

Nonetheless, the findings in the present study have practical academic and clinical implications for assisting college youth experiencing social anxiety symptoms. College youth can be helped by understanding the detrimental nature of anxiety sensitivity, intolerance of uncertainty and shame in social and performance situations, and developing skills to reduce concerns about anxiety symptoms and shame, and learning to cope with uncertainty by increased tolerance of uncertainty.[32,33]

This study is the first to investigate correlates of social anxiety symptoms in a sample of Lebanese college youth and as such requires replication and extension to socially anxious clinical populations in Lebanon. Nevertheless, the findings implicate anxiety sensitivity, proneness to shame and intolerance of uncertainty in the context of social anxiety and highlight their pertinence as potential targets for intervention.

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الملخّص

الاهداف: تهدف هذه الدراسة الى اختبار أعراض القلق الاجتماعي فيما يتعلق بالخوف من اعراض القلق، العار والميل الى التعامل بشكل سلبي مع عدم اليقين في مجموعة من الشبان الجامعي. **المنهج:** أكملت مجموعة من 300 تلميذ جامعي (51.9% إناث) النسخ العربية من استبيان القلق الاجتماعي للبالغين، مؤشر حساسية القلق -٣، مقياس العار للنفس، ومقياس عدم تحمّل عدم اليقين. **النتائج:** تم إشتقاق نتائج أعراض القلق الاجتماعي من استبيان القلق الاجتماعي للبالغين، كما تم اختبار علاقتها بالعوامل الديموغرافية كالسن والجنس وبعوامل الخطر الثلاث؛ حساسية القلق، العار، وعدم تحمّل عدم اليقين. لم يكن لنتائج أعراض القلق الاجتماعي علاقة بالعوامل الديموغرافية كالعمر والجنس. لكن نتائج أعراض القلق الإجتماعي كان لها علاقة ايجابية بحساسية القلق (ر=0.47,0.001>p) وبنتائج عدم تحمّل عدم اليقين (ر=0.43,0.001>p) وبنتائج العار (ر=0.36,0.001>p). **الخلاصة:** نتائج هذه الدراسة سلطت الضوء على العلاقة الوثيقة بين حساسية القلق والعار وعدم تحمّل عدم اليقين مع أعراض القلق الإجتماعي بين الطلاب الجامعيين. بالإضافة إلى ذلك، إن نتائج الدراسة تشير إلى أن علاج أعراض القلق الاجتماعي يجب أن يرتكز أيضاً على هذه العوامل الثلاث

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Appendix

Arabic version of the Social Anxiety Questionnaire for Adults (Arabic SAQ-A30)

النسخة العربية من استبيان القلق الاجتماعي للبالغين

(Caballo, Salazar, Arias, Irurtia, Calderero, and CISO-A Research Team, 2010)

Translated into Arabic by: Tina S. Sahakian and Shahé S. Kazarian

فيما يلي سلسلة من المواقف الاجتماعية التي قد تسبب (أو لا تسبب) لك "عدم الإرتياح"، "التوتر" أو"العصبية". يرجى وضع علامة "x " مقابل الرقم الدال على الحالة الاجتماعية التي تعكس ردة فعلك بالشكل الأمثل: رقم "١" يعني أن هذه الحالة لا تسبب لك أي "عدم الإرتياح"، "التوتر" أو"العصبية" والرقم "٥" يعني أن هذه الحالة تسبب لك بشدة "عدم الإرتياح"،"التوتر" أو"العصبية".

إن لم تختبر الحالة الموصوفة، يرجى تخيل مستوى "عدم الإرتياح"،"التوتر"، أو "العصبية" الذي قد تشعر به لو كنت في هذا الموقف المذكور ثم وضع علامة "X" قرب الرقم الذي يصف ردة فعلك، مقابل الموقف المذكور.

مستوى "عدم الإرتياح"،"التوتر" أو"العصبية"				
قليل أو معدوم	قليل	معتدل	مرتفع	مرتفع جداً
١	٢	٣	٤	٥

يرجى تقييم جميع المواقف بصدق تام حيث انه لا يوجد إجابة صحيحة أو خاطئة. شكرا على تعاونكم.

		قليل جداً أو معدوم	قليل	معتدل	مرتفع	مرتفع جداً
١	إلقاء التحية على شخص وتجاهله للتحية	١	٢	٣	٤	٥
٢	الطلب من أحد الجيران ان يتوقف عن إصدار الضجيج	١	٢	٣	٤	٥
٣	التحدث في الأماكن العامة	١	٢	٣	٤	٥
٤	دعوة شخص جذاب من الجنس الاخر للخروج في موعد رومانسي	١	٢	٣	٤	٥
٥	التذمر للنادل بشأن طعامي	١	٢	٣	٤	٥
٦	الاحساس بأن شخصاً من الجنس الاخر يقوم بمراقبتي	١	٢	٣	٤	٥
٧	المشاركة في اجتماع مع أناس ذوي سلطة	١	٢	٣	٤	٥
٨	التحدث مع شخص لا يعير انتباها لحديثي	١	٢	٣	٤	٥
٩	رفض القيام بشيء طُلب منّي لأنني لا أحب فعله	١	٢	٣	٤	٥
١٠	بناء صداقات جديدة	١	٢	٣	٤	٥
١١	اخبار شخص بأنه قام بجرح مشاعري	١	٢	٣	٤	٥
١٢	وجوب التحدث في الصف أو في العمل أو اجتماع	١	٢	٣	٤	٥
١٣	متابعة حديث مع شخص التقيته للتّو	١	٢	٣	٤	٥
١٤	التعبير عن الانزعاج للشخص الذي يقوم بإزعاجي	١	٢	٣	٤	٥
١٥	إلقاء التحية على جميع الاشخاص في حفل لا اعرف فيه معظم المدعوين	١	٢	٣	٤	٥
١٦	أن يتم مضايقتي في مكان عام	١	٢	٣	٤	٥
١٧	التحدث الى أشخاص لا اعرفهم في حفل أواجتماع	١	٢	٣	٤	٥
١٨	أن يتم توجيه سؤال لي في الصف من قبل المعلم أو في إجتماع من قبل شخص أعلى رتبة مني	١	٢	٣	٤	٥
١٩	النظر في عيني شخص، التقيته للتو، خلال حديث يدور بيننا	١	٢	٣	٤	٥
٢٠	أن يدعوني الشخص الذي أنا معجب به للخروج في موعد رومانسي	١	٢	٣	٤	٥
٢١	ارتكاب خطأ أمام أشخاص	١	٢	٣	٤	٥
٢٢	الذهاب الى مناسبة اجتماعية اعرف فيها شخصا واحدا فقط	١	٢	٣	٤	٥
٢٣	بدء حديث مع شخص يعجبني من الجنس الاخر	١	٢	٣	٤	٥
٢٤	أن يتم توبيخي بسبب خطأ ارتكبته	١	٢	٣	٤	٥
٢٥	أن يُطلب منّي التحدث بالنيابة عن المجموعة خلال تناول العشاء مع زملاء الدراسة أو العمل	١	٢	٣	٤	٥
٢٦	إخبار شخص بأن سلوكه يضايقني ومطالبته بالتوقف	١	٢	٣	٤	٥
٢٧	دعوة شخص اجده جذاباً للرقص	١	٢	٣	٤	٥
٢٨	ان يتم إنتقادي	١	٢	٣	٤	٥
٢٩	التحدث إلى شخص اعلى رُتبة او ذو سلطة	١	٢	٣	٤	٥
٣٠	إخبار شخص أجده جذاباً بأني اود معرفته أكثر	١	٢	٣	٤	٥

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Hallucinations in Patients with Schizophrenia Attending a Tertiary Psychiatry Hospital

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الهلوسات في مرضى الفصام الذين يراجعون مستشفى من المستوى الثالث

اندرياني خادم، صقر كاريا، افيناش دي سوسا

Abstract

Background: Schizophrenia is a clinical syndrome of variable, but profoundly disruptive psychopathology that involves thought, cognition, emotion, perception and other aspects of behavior. The incidence of hallucinations is around 70% in schizophrenia. Hallucinations have a powerful impact on the lives of those who experience them. **Objective:** The present study aims to understand the phenomenology of auditory hallucinations in patients of schizophrenia in a circumscribed Indian population taking treatment from a tertiary hospital in Mumbai. **Method:** 100 patients of a tertiary hospital for both inpatient and outpatient diagnosed as having schizophrenia as per DSM-IV TR and meeting inclusion criteria were included. Along with demographic profile, hallucination related semi-structured interview, Phenomenology of Hallucination Scale and Psychotic Symptom Rating Scale (PSYRATS) scale were administered. **Results:** Abusive types of auditory hallucinations were found in 42% of patients followed by commenting and threatening type in 21% and 13% of patients; 40% strongly believed in external cause for hallucinations and 44% were sure of external factors as cause irrespective of education status; 29% had anxiety of their hallucinations, but could be calm whereas 53% had extreme anxiety and bad feelings; 85% believed hallucinations as real and 71% had discomfort of it. No statistical significance was found across major variables. **Conclusion:** Abusive types of auditory hallucinations were the most prevalent. No significant associations were found between the educational status and the belief in source of hallucinations, the intensity of anxiety secondary to hallucinations and the reality of hallucinations. Duration of illness also did not affect the reaction to hallucinations. Further studies into the types of hallucinations and factors affecting the same in diverse populations are warranted.

Key words: Schizophrenia, hallucinations, phenomenology

Declaration of interest: None.

Introduction

Schizophrenia is a disorder which involves disruption of thoughts, cognition, emotions, perception and other aspects of behaviour.[1] The International Pilot Schizophrenia Study (IPSS) estimated that 70% of schizophrenia patients suffered from hallucinations.[2] The most common hallucinations in schizophrenia are auditory followed by visual and tactile, gustatory and olfactory being less common.[3] Apart from pharmacological treatment other methods like Transcranial Magnetic Stimulation (TMS)[4], Cognitive Behavior Therapy (CBT)[5] and Hallucination-focused Integrative Treatment (HIT)[6] have been tried for treatment of auditory hallucinations.

Hallucinations have a powerful impact on the lives of patients who experience them. Few investigators have reported that patients felt privileged, praised or amused by hallucinations and few with chronic hallucinations did not want to reject their hallucinations. It is known in psychopathology that hallucinations may be ego dystonic or ego syntonic.[7] On the other hand, there have been studies showing hallucinations being perceived as threatening, accusing, reproving, instructing (usually obscene), hurting, criticizing, disgracing, and

intruding.[8] A questionnaire study on attitudes towards hallucination applied to a group of 50 patients, found that 52% of the sample valued their hallucinations in one way or another (positive or negative), with twelve percent wanting their hallucinations to continue as they were helpful.[9]

The present study is an attempt to understand the phenomenology of auditory hallucinations in patients of schizophrenia in a circumscribed patient population. The aims of our study were to study the prevalence and types of auditory hallucinations in patients of schizophrenia while trying to ascertain any association between the demographic variables and hallucinations and determining whether the patient's response to hallucinations differ with longer duration of the illness.

Methodology

One hundred patients satisfying the DSM-IV TR criteria for schizophrenia,[10] with age greater than 18 years and willing to give consent for the study, were included while those with a history of demonstrable or documented probable organic cause for hallucinations were excluded. Patients with a history of cannabis, alcohol or other substance use except nicotine were excluded. All patients attending the outpatient department or admitted to Masina Hospital at Byculla, Mumbai over a one year period were screened as per inclusion/exclusion criteria and the first 100 patients that met our criteria were evaluated. Masina Hospital is a tertiary hospital in a private setting where there is a 40-bed inpatient psychiatric unit for male and female patients and various outpatient mental health facilities are available. The present study was approved by the Institutional Ethics Committee and all subjects were recruited after obtaining a written informed consent.

Individuals were interviewed according to a semi-structured proforma where sociodemographic data, illness related data and hallucination related data were collected. Hallucination related semi-structured interview, Phenomenology of Hallucination Scale and Psychotic Symptom Rating Scale (PSYRATS) were administered. The PSYRATS was created to measure dimensions of hallucinations and is easy and understandable. It is an 11-item scale, each one of which is scored with ordinal numbers (from 0-5). The scale measures the frequency, duration, location, intensity, degree of belief on origin of voices, amount of negative content of the voices, frequency of negative content of voices, frequency of anxiety, repercussion on daily life as well as control on voices.[11] Negative content of hallucinations includes hearing abusive language and derogatory content. Phenomenology of hallucinations scale is a semi-structured scale and is more helpful in measuring the reality of hallucinations as perceived by patients, constancy of hallucinations, understanding of cause and the reaction to hallucinations.[8] Data analysis was done using SPSS Version 20. The differences among the variables were compared using the Chi Square Test and score of $p \leq 0.05$ was considered as statistically significant.

Results

Analysis of data collected showed that from a total of 100 patients with schizophrenia, ages ranging from 18 years to 57 years attending the outpatient department as well as inpatient care, 49% were between the ages of 28 to 37; 31% were between the ages of 18 years to 27 years. Among the patients included, 86% were men whereas only 14 % were women, 49% were unmarried, 32 % were married, 18% were divorced or separated; 58% were studied up to secondary school, 22% up to higher secondary and 20% until graduation; 50% were irregular at work whereas only 9 % were regular in their occupational responsibilities. On the other hand, 41% were not working at all.

According to clinical profile of type of auditory hallucinations, 42% of the study population heard abusive voices, 21% heard voices commenting on their actions, 13% heard threatening and commanding voices, 9% of patients heard voices talking and fighting amongst themselves and 15% heard a mix of all of

above; 40% had a strong belief in external cause for hallucinations, e.g. the hallucinations were not a product of their imagination but were real while 44% were definitely sure that external causes were present irrespective of education status (Table 1). Only 5% believed in internal cause for hallucinations; 29% had anxiety about their hallucinations, but can be calm whereas 53% patients had extreme anxiety and bad feelings about it whereas 12% had little to moderate anxiety and only 6% had no anxiety (Table 2); 85% of patients believed their hallucinations to be real while 4% believed these to be dream and 11% as vague or not real; 71% patients had discomfort towards hallucinations while 26% were neutral towards it and 3% showed pleasurable feelings (Table 3).

Table 1: Relation between education status and belief in cause of hallucinations

Education (N=100)	Generated Internally/ Related to Self	Some Belief in External Cause	Strong Belief in External Cause	Only External Cause
Up to Secondary	3	8	20	27
Higher Secondary	2	1	9	10
Graduation	0	2	11	7
Chi Square= 5.038, df=6, p=0.539, Not Significant				

Table 2: Relation between education status and intensity of anxiety related to hallucinations

Education (N=100)	No anxiety	Little anxiety	Moderate degree of anxiety	Cause much anxiety, but can remain calm	Cause extreme anxiety, subject feeling very bad
Up to Second-ary	3	2	3	17	33
Higher secondary	2	1	1	7	11
Graduation	1	3	2	5	9
Chi Square= 5.152, df=8, p=0.741, Not Significant					

Table 3: Relation between education status and belief towards reality of hallucinations

Education (N=100)	Vague or not real	Image, imagination or dream	Just like the real thing or
Up to secondary	5	3	50
Higher secondary	2	0	20
Graduation	4	1	15
Chi Square= 3.309, df=4, p=0.508, Not Significant			

Table 4: Relation between duration of illness and reaction towards hallucination

Duration of illness (years)	Pleasure, comfort, reassurance or interest	Neutral/ ambiguous/loss of identity	Discomfort/pain/ fear/sadness/anger
1 to 4	2	6	17
5 to 9	0	9	27
10 to 14	1	10	20
>15	0	1	7
Chi Square= 5.092, df=6, p=0.532, Not Significant			

The relation between education status and belief in cause of hallucinations in our study was not statistically significant ($\chi 2$ = 5.032, p= 0.539). In addition, no significant relation was found between education and intensity of anxiety related to hallucinations ($\chi 2$ = 5.152, p= 0.741). Moreover, belief towards reality of hallucinations ($\chi 2$ = 3.309, p= 0.508). No statistically significant relation between duration of illness and reaction towards hallucination was found ($\chi 2$ = 5.092, p= 0.532).

Discussion

Abusive types of auditory hallucinations were the most prevalent whereas voices giving a running commentary were the second most prevalent type. In a Nigerian study, voices commanding and discussing patients in third person were commonest. These were mostly in the patients' mother tongue, regardless of westernized education.[12] Thirteen of 25 patients in a small research study reported that usually the content of voices was hostile.[13] In a study on 100 patients, it was reported that 53% were having commanding hallucinations and found that praying was the most common coping mechanism in those who did not comply to commands.[14]

In another comparative study amongst patients of Saudi Arabia and UK, it was found that much of the content of hallucinations of Saudi Arabian patients was religious and superstitious in nature whereas instructional themes and running commentary were more common in UK.[15] No significant associations were found between the educational status and the belief in source of hallucinations, the intensity of anxiety secondary to hallucinations and the reality of hallucinations. A study done in Vellore found supernatural explanations for symptoms of schizophrenia.[16] Researchers have found that voice hearers with a need for care are more likely to attribute their voices to real people or agencies, as opposed to spiritual or religious sources.[17]

Duration of illness also did not affect the reaction to hallucinations in our paper. A study done earlier showed that co-morbid anxiety disorders in schizophrenia can be related to delusions and hallucinations. Also in the same study it was noted that duration of illness did not have significant relation to anxiety.[18] A study done in 75 Indian patients on attitudes towards hallucinations reported more negative attitudes than positive and also attitude scores did not significantly differ among groups defined by sociodemographic or clinical variables.[7] A study where the PSYRATS-Auditory Hallucination measures of the clinical (patients currently having hallucinations) and non-clinical voice hearers (patients currently not having hallucinations) groups were compared, revealed that the two groups did not differ in ratings of physical characteristics of voices such as frequency, duration, location, or loudness nor in beliefs about the origin of voices. However, the clinical group's voices had more negative content and caused more distress and disruption to the voice-hearers' lives.[19]

Our study was limited by its small sample size and be choosing a fairly circumscribed hospital population along with many variables that were not assessed in the

study. There is a need for further detailed analysis of hallucinations in patients with schizophrenia along with an in depth analysis of factors affecting the same.

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الملخص

المقدمة: رغم تنوع أعراض الفصام العقلي كمتلازمه سريريه، إلا أنه يسبب اضطرابا شديداً في القدرات العقلية والتي تشمل التفكير، القدرات المعرفية، العواطف، الإدراك والسلوك، تحدث الهلوسات في حوالي 70% من مرضى الفصام العقلي وتؤثر جدياً على نمط حياة الذين يعانون منها، إن هذه الدراسة تهدف إلى محاولة الفهم الوصفي للهلوسات السمعية في مرضى الفصام، في فئة محددة من الهنود الذين يعالجون في مستشفى من المستوى الثالث في بومباي.
طريقة البحث: تضم الدراسة مئة مريض يعالجون في مستشفى من المستوى الثالث، وتشمل مرضى يعالجون داخل المستشفى أو يراجعون العيادة الخارجية، وقد تم تشخيصهم حسب DSM – IV TR واختيارهم للدراسة بعد استكمالهم لشروط الدراسة. بالإضافة للمعلومات الديموغرافية، فإنه قد تم تعبئة نموذج خاص على ضوء المقابلة مع هؤلاء المرضى لدراسة الهلوسات، وقد استعمل مقياس دراسة الهلوسات والأعراض الذهانية الوصفي (PSYRATS) لهذه الغاية. **النتائج**: اشتكى 42% من المرضى من هلوسات المسيئة، و21% من هلوسات تعليق على أفعالهم وأفكارهم، و13% من هلوسات تهديديه، وبغض النظر عن مستوى تعليمهم فإن 40% منهم اعتقدوا بوجود سبب خارجي لهذه الهلوسات، و44% كانوا على يقين من ذلك، وقد ظهرت أعراض القلق الخفيف والمسيطر عليه عند 29% من الحالات، بينما عانى 53% من الحالات من أعراض القلق الشديد. واعتبر 85% من المرضى هذه الهلوسات أصواتاً حقيقيه، وقد سببت هذه الهلوسات السمعية إزعاجاً وعدم راحة لما نسبته 71% من المرضى، وبعد دراسة المتغيرات المختلفة فإن هذه الدراسة لم تجد فرقاً إحصائياً ذو مغزى بين هؤلاء المرضى. **الإستنتاجات**: كانت الهلوسات المسيئة هي الأكثر انتشاراً بين الحالات المدروسة، إلا ان الدراسة لم تجد فرقاً إحصائياً ذو مغزى بين مستوى التعليم والاعتقاد بمصدر الهلوسات، أو بين شدة القلق الناتج عن هذه الهلوسات والاعتقاد بأنها حقيقيه وكذلك فإن مدة المرض لم تؤثر على ردة الفعل لهذه الهلوسات.

خلصت الدراسة إلى أن المطلوب عمل دراسات أخرى تشمل أنواع الهلوسات والعوامل المؤثرة في فئات أخرى واسعة من المجتمع.

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Religiosity and Obsessive Compulsive Symptoms in a Non-Consulting Sample of Medical Students

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التدين وأعراض الوسواس القهري بين طلبة كلية الطب

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Abstract

The present study evaluated the relationship between religiosity and obsessive compulsive symptoms among medical students. **Methodology:** One hundred and forty three students were randomly selected from a cohort of Suez Canal University medical students in the academic year 2013-2014. All consenting participants completed a religiousness measure questionnaire and the Obsessive Compulsive Inventory- Revised (OCI-R), which were translated into Arabic. **Results:** There was no statistically significant correlation between OCI-R total score and religiousness measure questionnaire subscale mean scores – each subscale individually - or even mean score of the three subscales together. Additionally, there was no statistically significant difference between students with obsessive compulsive symptoms indicating the likely presence of obsessive compulsive disorder (OCD) and those without such symptoms regarding increased levels of religious involvement, religious influence in daily life and religious hope respectively. However, a statistically significant positive correlation was found between certain types of obsessive compulsive phenomenology - namely compulsive washing and obsessive subtypes - and increased levels of religious involvement, religious hope and religious influence in daily life. **Conclusion:** No evidence could be found that identified religion as a causal factor for OCD. Nevertheless, religion is a likely contributing factor more to the kind of obsessive compulsive symptomatology than to the occurrence of OCD itself.

Keywords: religiosity, obsessive compulsive disorder

Declaration of interest: none

Introduction

Whilst a universal definition of religiosity that could be applied across religious groups would be ideal, it is likely that the meaning of religiosity will vary across groups. For example, Smart commented that Jewish religiosity 'is characterized more by orthopraxy than orthodoxy'; this implies that religious practice is more important in Judaism than actual belief while Christianity places much more emphasis on the importance of religious beliefs.[1] Consequently, it may be more accurate to measure religious attitudes when trying to determine levels of religiosity in Christians and religious practices in Jewish people. Equally there may be other religions in which both aspects are as important as the other, e.g. Islam.[2]

The hypothesis that there is a relationship between obsessive-compulsive (OC) neurosis and religiosity originated with Freud, who described religion as a universal obsessional ritual, designed to avert imaginary misfortunes and control the unconscious impulses that lead us to feel that we are causing them. This hypothesis was not popular with religious leaders of the time, and was also criticized by psychologists.[3]

Most empirical studies have found a positive association between religiosity and OCD symptoms.[2,4,5] However, the causal process responsible for this elevated obsessionality in highly religious individuals is largely unknown, it is contended that the heightened obsessionality in highly religious individuals is characterized by maladaptive beliefs about the need to control unwanted intrusive thoughts and increased effort

to refrain from "impure" or "sinful" cognitions. Various empirical studies have reported a positive association between OCD relevant beliefs and strength of religious devotion.[2,4,6,7]

In the current study we tried to find out the relationship between religiosity and obsessive compulsive symptoms among medical students where there is an increasing attention being paid to mental health care concerns of these students.[8]

Several reports have described increased prevalence of mental illness in medical students such as increased rates of anxiety and depression especially in women compared to the general population,[9,10] and increased incidence of obsessive compulsive symptoms in first year medical students which progressively declined in subsequent years.[11]

Finally, young doctors should be given the same level of care and support that we expect them to provide to their patients and the same should be extended to medical students in order to promote resilience and personal fulfillment and for enhancement of professionalism and patient care.[12]

Study Aim

The present study aimed to determine the relationship between religiosity and obsessive compulsive symptoms among medical students.

Participants and Methods

The present study is a cross-sectional analytic study done to detect the relationship between religiosity and obsessive compulsive symptoms among medical students. Religiosity is defined through three aspects of religiousness: religious influence in daily life, religious involvement and religious hope.

Sample size and sampling method

One hundred and forty three students fulfilling the inclusion and exclusion criteria were enrolled in the study. The least required number to be included into the study to achieve 90% (β) power and α error of 0.01 was estimated according to the following equation:

With ρ is the correlation between guilt inventory and Clarke Beck Obsessive Compulsive Inventory Obsessions Subscale = 0.46.

$(Z_\alpha + Z_b)$ 2 is a constant and equals 14.88 at power of the study of 90% (β) and α error of 0.01.

Thus, N = 140.

Therefore, the least required number to be included into the study to achieve 90% (β) power and α error of 0.01 was found to be 140 students.

Clustered proportional simple random sampling method was used as the studied population was classified into six clusters; each cluster represented an academic year. The included number of students from each cluster (year) was proportional to its percentage from total number of students.

Inclusion criteria

- All students who gave agreement to participate in the study.
- They were given the questionnaires after the end of their classes' sessions.

Exclusion criteria

- All students having positive history of any psychiatric illness.
- All students who have positive family history of psychiatric illnesses.
- All students suffering any chronic illnesses and taking medications on regular basis.

All participants were asked to complete The Religiousness Measure Questionnaire [13] and Obsessive Compulsive Inventory-Revised (OCI-R).[14]

An English-Arabic bilingual translator independently translated both questionnaires into Arabic; these

translations were then back translated into English by two professional psychiatrists.

The translated version of each tool, after content validation, was applied on to group of 20 students in a pilot study for further testing of face validity. Any inconsistencies were managed accordingly.

Study Tools

The Religiousness Measure Questionnaire[13]

The 17-item questionnaire is comprised of three subscales assessing aspects of religiousness: religious influence in daily life, religious involvement and religious hope. It includes two yes/no questions.

It was designed to measure religiosity as a part of a study which looked at the relationship between optimism and religious fundamentalism. Each of the three religiousness measure questionnaire subscales correlated positively with optimism, which was measured by the Attribution AL style questionnaire. The correlations were rather low (religious involvement r= .08, religious influence r= 14, religious hope r= .21); however, due to the large sample size, the correlations were statistically significant.

Religious hope was assessed through six questions, including "Do you believe that there is a heaven?" and "Do you believe your suffering will be rewarded?" These were evaluated using a Likert scale ranging from 1(strongly disagree) to 7 (strongly agree).

Religious involvement was measured using three questions, including "How often do you pray?" and evaluated on a frequency scale.

Six questions were designed to assess religious influence in daily life, including "How much influence do your religious beliefs have on the important decisions of your life?" and these questions were also evaluated through a 7-point Likert format.

In addition, each respondent was asked whether he or she believes in God and whether he or she would marry someone of another religion, which required a yes or no response.

Scoring was determined by calculating the mean for each subscale, (e.g. Responses on the religious involvement questions are scored on a scale of 1 to 6, with the higher number indicating greater involvement.) The two yes/no questions are not used in quantifying religiousness. The author reported that the religious material was rated in the three dimensions of internality, stability and globality reliability was very high with validity evidences.

Obsessive Compulsive Inventory- Revised (OCI-R)[14]

The OCI-R is a self-report scale consisting of 18 questions comprised of six subscales each with three items that a person endorses on a 5-point Likert scale for assessing Obsessive Compulsive Disorder (OCD) symptoms. It yields a profile of distress over the past month for each symptom area in the six subscales.

The 6 subscales are as follows:

1- Checking/doubting subscale (items 2,8,14)

2- Washing subscale (items 5,11,17)

3- Ordering subscale (items 3,9,15)

4- Obsessing subscale (items 6,12,18)

5- Mental neutralizing subscale (items 4,10,16)

6- Hoarding subscale (items 1,7,13)

Scores are generated by adding the item scores. The possible range of scores is 0-72 for the total score and 0-12 for each of the six subscales. The recommended cutoff score is 21with scores at or above this level indicating the likely presence of OCD.

Statistical methods

All data were processed using the Statistical Package for Social Sciences (SPSS15.0).[15] Quantitative data was expressed as means ± SD while qualitative data was expressed as numbers and percentages.

The Student t-test and ANOVA test was used to test significance of difference for quantitative variables and Chi Square was used to test significance of difference for qualitative variables.

Correlation coefficients were used to test the association between different scales assessing religiosity and obsessive compulsive symptoms. A probability value of p-value < 0.05 was considered statistically significant.

Results

The study sample was almost equally formed of men and women (71 men and 72 women). The majority of the sample were Muslims (95.1%).

Table 1. Presence of obsessive compulsive symptoms among the studied students

		Number	Percentage
Obsessive compulsive symptoms	Yes	107	74.83%
	No	36	25.17%

About 75% of the students were found to have obsessive compulsive symptoms. There was no statistically significant difference between students with obsessive compulsive symptoms indicating the likely presence of OCD, e.g. scoring above 21 on the OCI-R, and those without such symptoms who scored less than two. The relation between the presence of obsessive compulsive symptoms and gender, educational grade or religion is shown in Table 2.

Table 2. Relation between the presence of obsessive compulsive symptoms and gender, educational grade and religion of the studied group

		Obsessive compulsive symptoms				p-value
		Yes		No		
Gender	Male	52	48.6%	19	52.78%	0.7 (NS)
	Female	55	51.4%	17	47.22%	
Educational grade	First grade	24	22.43%	4	11.11%	0.2 (NS)
	Second grade	26	24.30%	3	8.33%	0.07 (NS)
	Third grade	21	19.63%	4	11.11%	0.4 (NS)
	Fourth grade	3	2.80%	0	0%	0.7 (NS)
	Fifth grade	13	12.15%	14	38.89%	0.2 (NS)
	Sixth grade	20	18.69%	11	30.56%	0.2 (NS)
Religion	Muslim	101	74.26%	35	25.74%	0.5 (NS)
	Christian	6	85.71%	1	14.29%	

NS: no statistically significant difference

There was no statistically significant difference between total mean score of religiousness measured in the questionnaire's three subscales (religious involvement, religious hope and religious influence in daily life) of the studied students and their gender, educational grade or religion as shown in Table 3.

Table 3. Relation between total mean score of religious involvement, religious hope and religious influence in daily life subscales and gender, educational grade and religion of the studied group

		Mean score of religiousness questionnaire 3 subscales	p-value
		Mean ± SD	
Gender	Male	5.29 ± 0.55	0.1 (NS)
	Female	5.12 ± 0.61	
Educational grade	First grade	5.07 ± 0.51	NS
	Second grade	5.28 ± 0.49	
	Third grade	5.16 ± 0.81	
	Fourth grade	5.3 ± 0.78	
	Fifth grade	5.22 ± 0.57	
	Sixth grade	5.28 ± 0.53	
Religion	Muslim	5.22 ± 0.58	0.09 (NS)
	Christian	4.87 ± 0.47	

NS: no statistically significant difference

There was no statistically significant difference between students with obsessive compulsive symptoms indicating the likely presence of OCD, e.g. those scoring above 21 on the OCI-R and those without such symptoms regarding their religious involvement, religious influence in daily life and religious hope as shown in Table 4.

Table 4. Relation between the presence of obsessive compulsive symptoms and religiousness measure questionnaire subscales mean scores among the studied students

	Obsessive compulsive symptoms		p-value
	Yes	**No**	
Religious involvement	3.91 ± 0.68	3.96 ± 0.8	0.7 (NS)
Religious influence in daily life	5.67 ± 0.93	5.69 ± 0.86	0.9 (NS)
Religious hope	5.96 ± 0.72	6.04 ± 0.78	0.5 (NS)

NS: no statistically significant difference

There is a statistically significant correlation between increased levels of religious involvement, hope and influence in daily life among studied students and certain types of obsessive compulsive symptomatology namely compulsive washing and obsessing as shown in Table 5.

Table 5. Correlation coefficient between OCI-R subscales scores and mean scores of religiousness measure questionnaire subscales:

OCI-R subscales	Religiousness measure questionnaire subscales							
	Religious involvement		Religious influence in daily life		Religious hope		Total mean score of religiousness measure questionnaire three subscales	
	r	p-value	r	p-value	r	p-value	r	p-value
Checking	0.2	0.05 (NS)	0.1	0.08 (NS)	0.05	0.9 (NS)	0.1	0.07 (NS)
Washing	**0.4**	**0.001***	**0.5**	**0.001***	**0.5**	**0.001***	**0.6**	**0.001***
Ordering	-0.04	0.6 (NS)	0.1	0.09 (NS)	0.1	0.06 (NS)	0.08	0.3 (NS)
Obsessing	**0.4**	**0.001***	**0.6**	**0.001***	**0.5**	**0.001***	**0.7**	**0.001***
Mental neutralizing	-0.08	0.3 (NS)	-0.09	0.6 (NS)	0.1	0.3 (NS)	0.1	0.4 (NS)
Hoarding	-0.1	0.1 (NS)	0.07	0.5 (NS)	0.05	0.6 (NS)	0.1	0.3 (NS)
Total OCI-R score	0.09	0.2 (NS)	0.05	0.5 (NS)	0.03	0.7 (NS)	0.02	0.8 (NS)

NS: no statistically significant difference
***Statistically significant correlation**

There is no statistically significant difference between the total score of the OCI-R and mean score of religiousness measure questionnaire three subscales together - assessing religious involvement , religious hope and religious influence in daily life - among studied students as shown in Table 6.

Table 6. Correlation coefficient between OCI-R total score and mean score of all religiousness measure questionnaire subscales among the studied students

OCI-R	**Mean score of all three religiousness measure questionnaire subscales**	
	r	**p-value**
Total OCI-R score	0.02	0.8 (NS)

NS: no statistically significant difference

Discussion

In the current study, we tried to study the relationship between religiosity and obsessive compulsive symptoms among medical students while adopting the hypothesis that there will be a link between religiosity on one hand and obsessive compulsive phenomenon on the other hand. The study sample was almost equally formed of men and women (71 men and 72 women). The majority of the sample were Muslim (95.1%).

After analyzing the OCI-R questionnaire total scores of the studied students, it was found that there was no statistically significant difference between students with obsessive compulsive symptoms indicating the likely presence of OCD - nearly 75% of the studied students - and those without such symptoms regarding their gender or religion.

The religiousness measure questionnaire results analysis on the other hand showed that the mean scores of its three subscales - each of them individually – and

the mean score of the three subscales together – religious involvement, religious hope and religious influence in daily life – were not statistically different among studied students regarding their gender, educational grade or religion.

When trying to analyze the relation between religiosity and obsessive compulsive phenomenon it was found that there was no statistically significant correlation between OCI-R total score and religiousness measure questionnaire subscales mean scores – each subscale individually - or even mean score of the three subscales together and that there was no statistically significant difference between students with obsessive compulsive symptoms indicating the likely presence of OCD and those without such symptoms regarding increased levels of religious involvement, religious influence in daily life and religious hope respectively. However, a statistically significant positive correlation was found between certain types of obsessive compulsive phenomenology, namely compulsive washing and obsessing subtypes, and increased levels of religious involvement, religious hope and religious influence in daily life.

Our findings are in line with Okasha's study in which the most frequently occurring obsessive compulsive themes in different countries (Egypt, Israel, India and England) were compared. Orthodox religious groups, such as the Muslims in Egypt and the Orthodox Jews in Jerusalem, showed mainly religious themes and themes related to cleanliness and dirt. In contrast, the common themes in British and Indian samples were mainly related to orderliness and aggressiveness indicating that cultural and religious backgrounds have an influence on obsessive compulsive phenomenology to a large extent.[16]

Further, Karadag et al. compared two Muslim countries, Egypt and Turkey, and found a relation between the degree of orthodoxy or strictness and the occurrence of religious obsessive compulsive symptoms.[17] Similarly, Abramowitz et al. investigated the link between obsessive-compulsive symptoms and Christianity, specifically protestant religiosity. The subjects consisted of Protestants who were classified into three groups: high, moderate and low religious by means of a three item questionnaire determining religious beliefs. The high religious group were identified to have increased obsessional symptoms and compulsive washing rituals when compared with the low religious group therefore reporting a link between certain types of obsessive compulsive phenomenology hand and religiosity.[18]

Greenberg and Witztum studied a group of 34 patients with OCD comparing the symptom profiles of 19 orthodox religious Jews with a group of 15 non-orthodox religious Jews and, similarly, found a significantly higher degree of religious obsessive compulsive symptoms in the orthodox group (68 versus 0.07%).[19]

Other studies reached similar conclusions to our study. Steketee et al. measured relevance of religious beliefs in a clinical sample of 33 participants with OCD and 24 with anxiety disorder. Religiosity was measured by means of a questionnaire and obsessive-compulsive symptoms were measured by a number of checklists. Following analysis of results, it was found that there was no difference in the degree of religiosity; however, a correlation between religiosity and the occurrence of religious obsessive compulsive symptomatology was found.[20]

Sica et al. also investigated the relationship between religiosity and obsessive-compulsive symptoms in three groups of Italian Catholics: one 'highly religious' group of 54 nuns and friars, one 'moderately religious' group of 47 individuals involved with their churches and one 'low religious' group of 64 students who scored lowest on a religious beliefs questionnaire.[21]

All subjects also completed a number of other questionnaires including the Obsessive Beliefs Questionnaire (OBQ). Upon analysis of results, the high religious group was found to have higher levels of obsessionality, which implies that there may be a

putative link between religiosity and certain types of obsessive compulsive phenomenon in Italian Catholics.[21]

Although the previously mentioned studies suggest a positive correlation between religion and obsessive compulsive phenomenon, others could not confirm these findings. Tek and Ulug conducted a study on 54 patients with OCD using both the Y-BOCS and Y-BOCS checklist to measure the obsessive-compulsive symptoms and the religious practice index to map the religiosity of the group. Forty-two percent of the patients suffered from religious obsessive compulsive symptoms. No relation was found between the degree of religiosity and OCD severity nor between the degree of religiosity and the expression of religious symptoms; besides, it was concluded that the occurrence of religious obsessions depends on the severity of OCD and is unrelated to someone's religiosity.[22] Similarly, Hermesh et al. compared three groups: 22 patients with OCD, 22 with panic disorder patients and agoraphobia, and 22 surgical patients. The research found no difference in religiosity either.[23]

Studies using non-clinical samples had similar results. Assarian et al. measured religiosity and obsessive-compulsive symptoms in a group of Iranian students and found no link between religiosity and OCD.[24]

A literature search on obsessive compulsive phenomenon and religiosity reveals that there are a number of studies supporting a link between religiosity and obsessive compulsive phenomenon despite there being considerable evidence to refute this. It noteworthy that certain difficulties were encountered in the previous studies addressing research points such as the absence of a universally agreed definition of religiosity, the absence of a uniform method of measuring religiosity where in the previous studies religiosity was both defined and measured in different ways. Many of the tools used were developed specifically for the study in question and so were subsequently not used in any other study, which has made difficult to determine if the used tools were measuring the same parameters.

An additional problem encountered was the subjects used by different groups, some studies recruited clinical participants whilst others used a non-clinical sample and it remains debatable whether findings from studies using these two subject groups are comparable.

Therefore, it would be difficult to reach a firm conclusion regarding the link between religion and obsessive compulsive phenomenon until the above problems are addressed; and, if a link is found to be supported by the literature, it would also be important to distinguish cause and effect by determining if religion leads to obsessive compulsive traits or whether those with inherent obsessive-compulsive traits are more likely to be religious. Comparative studies among nations using an elaborate screening tool with a prospective study could help to find answers.

Conclusion

In conclusion, no evidence could be found to determine religion as a causal factor in promoting OCD. Nevertheless, religion likely contributes to the kind of obsessive compulsive symptomatology than to the occurrence of OCD itself. Religious people are probably more scrupulous than non-religious people. As a result, it may be argued that several thoughts and impulses will be viewed as condemnable and should therefore be suppressed which in turn provoke obsessional thoughts. The need to suppress unwanted thoughts could be a factor contributing to certain subsets of obsessive compulsive symptoms, e.g. religious, aggressive and sexual obsessions.

Further research is needed in order to understand the concept of religiousness, its definition and how to measure it precisely. Equally, it would be important to conduct research find out the relation between religiousness and various psychiatric phenomenon since this is not an extensive area of research. Furthermore, elaborate screening would be beneficial in future

studies, testing this link are required to overcome the limitations underlying the contradictory findings in the literature.

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الملخص

تهدف هذه الدراسة إلى دراسة العلاقة بين التدين وأعراض الوسواس القهري بين طلبة كلية الطب. تم اجراء الدراسة على 143 طالبا وطالبة كعينة ممثلة إحصائياً لطلبة كلية الطب البشرى بجامعة قناة السويس للعام الدراسي 2013-2014. قام الطلاب موضع الدراسة بملأ استمارة لتقييم مدى تأثير التدين على الأنشطة اليومية المختلفة وكذلك تقييم حجم ممارسة الأنشطة الدينية المتعددة ومدى تأثير التدين على مستوى الأمل، كما تم ملىء استمارة اخرى لاكتشاف وجود أعراض وساوس قهرية مسببة للضيق على مدار شهر سابق من عدمه وذلك بعد توضيح هدف الدراسة للطلاب موضوع البحث وأخذ الموافقة المستنيرة على المشاركة في جميع خطوات الدراسة. تم ترجمة الاستمارتين إلى اللغة العربية ترجمة صحيحة كما تم عمل جميع الاجراءات العلمية المنضبطة للتحقق من درجة صدق وثبات تلك الاستمارات كأدوات للقياس قبل اعطائها للطلاب موضع الدراسة عن طريق اجراء دراسة تجريبية ضمت 20 طالباً وطالبة للتأكد من قدرة الاستمارتين على قياس المتغيرات التي صممما من الأصل لقياسها تبين وجود أعراض وساوس قهرية مسببة للضيق على مدار شهر سابق بين ما يقرب من 75% من الطلاب موضع الدراسة فيما لم يتبين وجود علاقة احصائية ذات دلالة بين مستوى تدين الطلاب ووجود أعراض الوسواس القهري من عدمه . ولكن على الجانب الاخر تبين وجود علاقة احصائية ذات دلالة بين تزايد وجود أعراض وساوس قهرية معينة مسببة للضيق على مدار شهر سابق كالغسل القهري وكثرة الهواجس من ناحية وتزايد تأثير التدين على الانشطة اليومية المختلفة وزيادة مستوى الممارسات الدينية المختلفة ومستوى الامل من ناحية اخرى.

يستنتج من هذه الدراسة وجود علاقة واضحة بين التدين ومحتوى أعراض الوسواس القهري.

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Determinants of Long Duration of Untreated Psychosis and Medication Adherence in Egyptian Schizophrenic Patients: The role of Social Support

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محددات طول مدة البقاء بدون علاج الذهان والالتزام الدوائي في مرضى الفصام: دراسة دور الدعم الاجتماعي

ايمان الششتاوي، رمضان حسين

Abstract

Background: Any delay in the treatment of individuals affected by psychosis seems to constitute a highly negative prognostic factor with early intervention being considered an important component of treatment programs. **Objectives:** The present study explored the sociodemographic, clinical characteristics that are associated with and can predict long duration of untreated psychosis (DUP). It evaluated medication adherence and the role played by social support in medication adherence. **Method:** A cross sectional study of 90 patients diagnosed with schizophrenia according to DSM IV-TR were assessed clinically by semi-structured interviews for socidemographic data and determination of DUP. The following scales were used: Scales for the Assessment of Positive Symptoms and Negative Symptoms (SAPS and SANS), Global Assessment of Functioning (GAF), Morisky Medication Adherence Scale (MMAS), Schedule for the Assessment of Insight (SAI-E), and Multi-Dimensional Scale of Perceived Social Support. **Results:** DUP was significantly negatively correlated with GAF, SAIE, MMAS, perceived social support(r=-.220, -.213, -.211,-.641 respectively). Predictors of long DUP were being a woman, unmarried, having a lower education, unemployed in addition, high level of negative symptoms (beta=-.186, -.141, -.272, -.559, .231 respectively) while social support was the only predictor of medication adherence (beta= .388). **Conclusion:** Early identification and management of the factors that can influence DUP should be included in early intervention initiatives.

Key words: Schizophrenia, untreated psychosis, outcome, adherence, social support,

Declaration of interest: None

Introduction

In recent years, an increasing number of reports show that duration of untreated psychosis (DUP), namely the time gap between the onset of psychotic symptoms and first treatment, may play a relevant role in the prediction of long-term treatment-response and outcome.[1] Converging evidence indicates that a prolonged DUP may be viewed as a negative prognostic factor in schizophrenia.[2]

Causes and consequences of the DUP are studied for many reasons, as it represents a modifiable parameter;[3] its reduction could positively influence the outcome and long-term course of related mental conditions.[4,5] In addition, the relationship of DUP to outcome may contribute to better understanding of the patho-physiology and the neurobiological changes occurring with the progression of the illness. Approaching the field of the latency to treatments of mental disorders implies specific considerations, which are inherent to the psychiatric field.[6]

Schizophrenia is a chronic neurodegenerative disorder associated with cerebral volume deficits in the cortical and subcortical regions,[7] with studies showing that anatomical deficits become more severe after the first episode.[8,9] As a consequence, there may be an important

therapeutic opportunity to ameliorate the long-term course by reducing post-diagnosis neurodegenerative progression through a reduction of the DUP. Indeed, DUP has been associated with an unfavorable outcome.[10,11] In particular, a significant association between DUP and several outcome indicators; compared to short, longer DUP was associated with a worse outcome at six months in several domains. Patients with a long DUP were significantly less likely to achieve remission.[10]

Medication adherence in schizophrenia is a multifactorial phenomenon involving four main groups of factors: sociodemographic variables (age, gender, occupation, level, of education, and social status); illness-related variables (severity of symptoms, insight, course of illness); treatment-related variables (dosage complexity, frequency and side effects, length of treatment); and patient general values and attitudes.[12] In addition, patients' decisions to be adherent may be the result of interaction among different factors, such as the degree of global psychopathology, the side effects experienced or perceived subjective well-being.[13] Poor adherence in patients with schizophrenia is associated with increased hospitalization[14], and also associated with an increased risk of relapse, a poorer quality of life, a higher level of residual symptoms with lower overall functioning, poorer long-term outcomes in terms of relapse rates, progressive cortical decrease,[15] and suicide attempts.[16]

Social support has been linked to outcome in schizophrenia,[17] through the effect of family-related interventions on symptoms, social functioning[18]as well as the number and length of hospitalizations.[19] The degree of social support may play an important role in improvement of symptoms, decreased rates of hospitalization and improved functioning.[20]

The aim of the present study is to explore the socio-demographic, clinical characteristics that are associated with and can predict long DUP, and medication adherence and to evaluate the role played by social support in medication adherence, DUP.

The present study was a cross-sectional descriptive study conducted between July 2014 and December 2014 at the outpatient clinic of the department of Psychiatry, Mansoura University Hospital in Egypt. The hospital has 42 beds and renders services to patients from the East Delta region. Outpatient clinics are run three days a week by consultant psychiatrists supported by resident doctors, psychologists and psychiatric nurses. Approval to perform the study was obtained from the hospital authority. Patients who met the following criteria were invited to participate:

(1) Diagnosis of schizophrenia as defined by the Structured Clinical Interview for DSM IV (SCID1 Arabic version).[21] (2) Age between 20 and 65 years, (3) Patients with no major chronic physical illness, organic brain syndrome or history of substance abuse. All patients provided informed consent in advance of assessment. A convenience sample of 107 patients met the inclusion criteria and 90 agreed to participate in the study. Participants were assessed by interviewers by Scales for the Assessment of Positive Symptoms and Negative Symptoms (SAPS and SANS)[22,23] , and then asked to complete two scales to assess medication adherence and in addition to a sociodemographic questionnaires and clinical data, namely age at onset of the disorder (based on first clear clinical psychopathological symptoms), age at first treatment, duration of untreated psychosis (DUP).

Assessment and measures

The instrument used in the present study consisted of Part 1 elicited socio demographic data (age, marital status: married or unmarried; and, education: below secondary education, above secondary education; income: satisfactory, unsatisfactory; employment status: employed, unemployed; clinical: age of onset in years.

DUP determination: DUP was defined as the time between the onset of first psychotic symptoms (e.g., hallucinations, delusions, thought disorder, or inappropriate or bizarre behavior) and the time of receiving first adequate treatment. To determine the

onset date, patients and family members were asked to state when the patient (or family member) first experienced (or noticed) behavioral changes that, in retrospect, appear to be related to the patient becoming ill. These changes must have lasted throughout the day for several days or several times a week and not be limited to a few brief moments. The patients (or family members) were asked again, after explaining psychosis in clear language, when they first experienced (or noticed) psychotic symptoms. When there were differences between patients and family members, the date given by the patient was taken because most of the time the exact onset of illness had been overlooked by the relatives.[24]

Part 2 was a medication adherence scale (MMAS). Part 3 was a schedule for the assessment of insight and perceived social support.

Medication adherence was assessed using the Arabic version of the validated 8- item Morisky Medication Adherence Scale (MMAS).[25,26] The Arabic version of the MMAS is an 8-item questionnaire with seven yes/no questions and one question answered on a 5-point Likert scale. According to the scoring system for the MMAS, 8 = high adherence, 6 to < 8 = medium adherence, and < 6 = low adherence. Patients who had a low or a moderate rate of adherence were considered non-adherent.

The Schedule for the Assessment of Insight, Expanded version (SAI-E) was used to examine the insight[27,28] SAI-E was developed by Kemp and David (1995) to assess insight as three separate dimensions: treatment compliance composed of items no. 1, 2,3,4,5 and 6 (rated 0 to 2), recognition of illness composed of items no. 7 and 8 (rated 0 to 4), and symptom relabeling, item no. 9 (rated 0 to 4). The total score is measured by the sum of three scored dimensions. The patient has no insight when the total score ranged from zero to 12 grades, while the patient has full or good insight when the total score ranged from13 to 24 grades.

Multidimensional Scale of Perceived Social Support (MSPSS).[29] The MSPSS is a 12-item, self-report scale assessing perceived social support from three sources; for example, family, friends, and significant other. Each item is rated on a 7-point scale, ranging from disagree very strongly to agree very strongly, with a higher score indicating better social support. The items deal with general areas of support and there are no items directly related to adherence behaviors. The reliability, validity, and factor structure of the MSPSS have been demonstrated across various different populations, including outpatients with psychotic disorders.[30] The scale was translated into Arabic, back-translated into English and then translated again into Arabic. The reliability during a short retest interval of several days was reported to be 0.85, where the Cronbach's alpha coefficient for the subscales ranged between 0.524 and 0.872 and for the entire scale was 0.725.

Data were entered into the Statistical Package for the Social Sciences, Version 15.0 (SPSS v. 15.0) and were analyzed using descriptive and analytic analyses including frequencies, mean and standard deviations. For duration of untreated psychosis, the median duration was calculated and used to split the sample into two groups, short and long duration. Independent t test was then performed on various items. Pearson correlation coefficients were used to detect associations between variables. A P value of < 0.05 was considered significant in all analyses. Stepwise regression analysis was used to determine which of the social or clinical variables were independently associated with long DUP and medication adherence.

Results

Table A sociodemographic and clinical characteristics of the total sample and the two subgroups split around the median value of DUP.

A convenience sample of 105 Muslim patients with schizophrenia met the inclusion criteria during the study period. Fifteen patients refused to participate and 90 patients agreed, yielding a response rate of 86%. Of the 90 patients, the mean age was 38.6±12.3 years and mean age of onset was 32.6 ± 6.2. 72.2%. Patients had less than 12 years education, unmarried (57.8%),

unemployed (73.3%) and unsatisfactory income (81.1%). Mean age of the group of longer DUP was significantly higher; mean age of onset did not differ. The longer DUP group were more to be employed (x2=16.200), satisfactory income (x2=13.235), had a significantly higher insight (t=1.876), higher medication adherence (t=3.221) and higher perceived social support (t=15.152).see table 1

Table 1: Sociodemographic and clinical characteristics of the total sample and two subgroups split around the median duration of untreated psychosis

	Total N (90) n (%) or mean (SD)	**Untreated psychosis <2years N (42) n (%) or mean (SD)**	**Untreated psychosis≥2years N (48) n (%) or mean (SD)**	**Analysis**
Age	32.6 ± 6.3##	35.17±6.28##	32.03±6.28##	t=2.1059*
Gender				
Male	58 (64.4)	27(64.3)	31(64.6)	N S
Female	32 (35.6)	15(35.7)	17(35.4)	
Age at onset	23.63±3.473	24.25±3.74	23.41±3.37	t=1.0201
Education				
12 years or less	65 (72.2)	31(73.8)	34((70.8)	
more than12 years	25 (27.8)	11(26.2)	14(29.2)	N S
Employment				
Unemployed	66 (73.3)	23(54.3)	47(97.9)	X^2=8.229**##
Employed	24 (26.7)	19(45.7)	1(2.1)	X^2=16.200**##
Marital status				
Unmarried	52 (57.8)	37(88)	47(97.9)	NS
Married	38 (42.2)	5(12)	1(2.1)	
Income				
Unsatisfactory	73 (81.1)	26(61.9)	47(97.9)	X^2=6.041*##
Satisfactory	17 (18.9)	16(38.1)	1(2.1)	X^2=13.235**##
SANS	65.3 ± 19.5	66.5 ± 20	64.3 ± 19.2	t=.549
SAPS	42.7 ± 14.1	40.02 ± 15.8	45 ± 12.2	t=-1.683
GAF	37.3 ± 5.3	37.9 ± 4.8	36.9 ± 5.6	t=.903
SAIE	13.6 ± 3.4	14.3 ±3.8	12.9 ±2.8	t=1.876**
MMAS	6.6 ± 1.2	7.04 ± 0.9	6.3 ± 1.3	t=3.211**
DUP	24 ± 14.4##	0.99 ± 0.2##	2.8 ± 1.13##	t=-10.499**
Social support	50.7 ± 21.1	69.7 ± 8.3	34 ± 13.9	t=15.152**

The group was divided around the median of duration of untreated psychosis into two groups :< 2 years, ≥ 2 years

SANS: scale for negative symptoms

SAPS: scale for positive symptoms

GAF: global assessment of functioning

SAIE: schedule for assessment of insight, expanded version

MMSA: Morisky medication adherence scale

*Significant p≤ .05 **highly significant at p≤ .01

A. Correlates of duration of untreated psychosis

As observed from Table 2, long DUP was significantly positively correlated with SAPS, SANS (r=.259, .232 respectively), and significantly negatively correlated with GAF, SAIE, MMAS, perceived social support (r=-.220, -.213, -.211,-.641 respectively).

Table 2: Correlation between DUP and some psychological parameters

Parameters	r	P
SAPS	.259	.014*
SANS	.232	.028*
SAIE	-.213	.044*
MMAS	-.211	.046*
Social support	-.641	.001**
GAF	-.220	.037*

*Significant p≤ .05

**highly significant at p≤ .01

B. Correlates of medication adherence

Level of adherence as measured by Morisky medication adherence scale (MMAS) was significantly negatively correlated with DUP(r=-.2110), highly significantly correlated with perceives social support (r=. 388)

Table 3: Correlation between medication adherence and psychological parameters

Parameters	R	P
SAPS	-.190	.073
SANS	-.059	.579
SAIE	.039	.717
DUP	-.211	.046*
Social support	.388	.001**
GAF	.164	.123

*Significant p≤ .05

**highly significant at p≤ .01

C. Predictors of long DUP and adherence

From Table 4 it was observed that, being female, unmarried, lower education, unemployed and exhibiting a high level of negative symptoms were all predictors of long DUP (beta=-.186, -.141, -.272,-.559, .231 respectively). While Table 5 shows that, social support was the only predictor of medication adherence (beta= .388).

Table 4: Stepwise Regression analysis for predictors of long DUP

Predictors	**R^2**	**Beta**	**T**	**P**
Sex	.607	-.186	-2.687	.009**
Education		-.141	-2.038	.045*
Employment		-.272	-3.496	.001**
Marital status		-.559	-7.219	.001**
SANS		.231	3.329	.001**

Dependent factor: DUP

*Significant p≤ .05

**highly significant at p≤ .01

Table 5: Stepwise Regression analysis for predictors of adherence

Predictors	R^2	Beta	T	P
Social support	.150	.388	3.946	.001**

Dependent factor: Adherence
*Significant p≤ .05
**highly significant at p≤ .01

Discussion

Our study demonstrated that DUP was between two years up to five years. The median was two years. This was supported by Fawzi et al.[31] who reported that the mean DUP of Egyptian patients was very long compared with that reported from other countries, especially from developed ones.[32] Studies conducted in Arab countries reported that it was approximately 148.7 weeks in the Ibn Rushd Psychiatric center in Morocco,[33] while the median DUP was 1.41 years (inter quartile range 0.35–2.81 years) in another study in Saudi.[34] This suggests that prolonged treatment delay is of major clinical concern in our cultures.

Patients with DUP of less than two years were more likely to be employed and consequently more likely to have satisfactory income, thus indicating better functional outcome. That group of patients showed significantly more medication adherence as a result of more perceived social support although no other differences were noticed.

Long DUP was found to be correlated with high level of positive symptoms, negative symptoms and negatively correlated with global assessment of functioning. This was contradicted by previous studies that found an association only with negative symptoms.[35,36,37] While other study found that longer periods of untreated psychosis were significantly associated with higher levels of positive symptoms, but not negative symptoms.[38] Although this finding contradicts another study that failed to find evidence that a longer period before treatment was associated with more severe illness.[39] Significant heterogeneity was present between studies that contributed correlational data on DUP and negative symptoms and on DUP and positive symptoms. The great variation between studies would be expected by chance, which implies that there were systematic differences in the study methods at first presentation. While association with poor global functioning was confirmed by the study of Pentilla et al., who proved that long DUP was associated with more severe outcomes in the form of more severe positive symptoms, negative symptoms and poor global functioning outcome.[1]

Long DUP was correlated with poor insight, medication non-adherence and lack of social support. Poor insight has been shown to be associated with clinical factors.[40] The association of poor insight with DUP was confirmed in previous study made by Hui et al., who postulated that poor insight is usually associated with prolonged DUP.[41]

DUP is strongly associated with medication non-adherence. Dassa et al. have reported this result previously, Na E et al. who identified a relation between good insight and increased medication adherence.[42.43] This seems coherent with the concept of DUP, as longer DUP may be associated with poorer treatment outcome. However, others have not identified a relationship between DUP and non-adherence to medication.[44]

Being a woman was found to be one of the predictors of long DUP with nearly similar results obtained by El Hamaoui et al.[33] Previous studies examining this association showed discrepant results. Thorup et al.[45] for example, reported that men had a longer DUP than women. By contrast, Kster et al.[46] found that women had longer DUP. However, Large and Nielssen examined more than 100 published studies of DUP and found fewer than one third had mentioned the DUP of men and women separately.[47] Our result could be explained in cultural terms as high percentages of families try to hide

the presence of mental illness in women and prefer seeking help from traditional healers for fear of stigma of mental illness. This was supported by an Egyptian study reporting that cultural factors and lack of knowledge play an important role in delayed access to psychiatric care.[48]

Also, being single and unemployed with low education predicted long DUP, which could reflect poor social functioning and support. This was confirmed in a previous study, which proved that being married and employed was associated with shorter DUP[49] because patients with better functional capabilities were found to be more aware of their illness and more likely to seek help earlier.

Perceived social support was strongly related to short DUP, good medication adherence, and was the only predictor of medication adherence, according to our results. This finding was supported by Rabinovitch et al. who confirmed that the rate of change in adherence is similarly influenced by the rate of change of social support.[50] Poor social support has been shown to affect adherence to medical therapy and increase frequency of hospitalization.[51,52] The relation between social support and outcome is, at least partly, mediated through the effect of social - especially family - support on adherence to medication.

Limitations

The relatively small sample size makes detection of significant results less likely. Second, the present study was cross-sectional and, therefore, has limitations for establishing the prospective causal effects of DUP on outcome; a prospective longitudinal study with a larger sample size is required to clarify the direction of relationship. Third, self-reported adherence might not match actual adherence and an objective adherence measure, e.g. plasma drug concentration, was lacking. Fourth, the present study may not generalize to the general patient population since it was based on a convenience sample rather than an epidemiological cohort. The DUP and pathway data were based on patients' descriptions and therefore subject to recall bias. To enhance validity, at least one family member who was present during the interview confirmed all data. Moreover, some patient-related factors such as poor social adjustment, or other psychopathologies that might contribute to treatment delays were not controlled for.

Conclusions and recommendations

Long DUP is associated with more severe positive, negative symptoms and poor global functioning. Factors found to influence DUP should be taken into account in early intervention initiatives, and efforts should be made to increase public awareness about early symptoms of mental illness for early detection thus decreasing the risk of DUP.

Active interventions with support networks specifically promoting adherence to treatment may be necessary even when an adequate level of support is available.

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الملخص

الخلفية: لقد تبين أن أي تأخير في علاج المرضي المصابين بالذهان ينذر بنتائج سلبية، ولذلك فان التدخل المبكر يعد عنصرا هاما في البرامج العلاجية المختلفة. **الأهداف:** استكشاف الخصائص الاجتماعية والديموغرافية في مرضي الفصام التي ترتبط مع ويمكن أن تتنبأ بطول مدة البقاء بدون علاج وبالالتزام الدوائي وتقييم الدور الذي يلعبه الدعم الاجتماعي في تلك الحالات. **الطرق والأدوات:** أجريت الدراسة على تسعين مريضا بالفصام حسب التقسيم الأمريكي للأمراض النفسية، واجري لهم الآتي: فحص إكلينيكي سريري واستبيان لمعرفة الخصائص الديموغرافية وتم تطبيق المقاييس التالية: اختبار سابس وسانس للأعراض الموجبة والسالبة، وتقييم الوظائف الكلى جاف، اختبار لتقييم درجة البصيرة، اختبارموريسكى لمعرفة مدى الالتزام الدوائي واختبار لقياس مستوى الدعم الاجتماعي. وتم تحليل النتائج وتوصلنا إلى أن من المنبآت لطول فترة البقاء بدون علاج كانت الإناث، انخفاض درجة التعليم، عدم الزواج، وعدم وجود عمل، وارتفاع درجة الأعراض السالبة (على التوالي بيتا = .186، -.141، -. 272.، -.559. , - 231 ، في حين أن الدعم الاجتماعي كان المنبأ الوحيد لدرجة الالتزام الدوائي (بيتا=388.). وقد توصلنا إلى أن التعرف المبكر ومعالجة الأسباب التي يمكن ان تؤدى لطول فترة البقاء بدون علاج يجب ان يكون جزءا أساسيا في أساسيات التدخل السريع للعلاج

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الباحثات العربيات: مشهد عبر المجلة العربية للطب النفسي

مها سليمان يونس

Arab Women Researchers: A View from the Arab Journal of Psychiatry

Maha S. Younis

الخلاصة

لهدف: تهدف هذه الورقة إلى تقييم إسهام الباحثة العربية في حقل الصحة النفسية كماً ونوعاً، في دورية طبنفسية محكمة وهي المجلة العربية للطب النفسي منذ تاريخ تأسيسها وعلى مدى الخمس وعشرين سنة الماضية. **الطريقة:** أجريت عملية التصفح الالكتروني يدوياً لكل الاعداد الصادرة على موقع المجلة العربية للطب النفسي على الشبكة العنكبوتية، وما تيسر من الإصدارات الورقية خلال الفترة الزمنية 1989-2014، أحتسبت مجموع الإصدارات وعدد الباحثين الكلي، الدراسات المعنية بالصحة النفسية للمرأة ثم تم فرزالباحثات السيدات مع تحليل الجانب المهني والبحث لديهن، أخضعت المعلومات للتحليل الإحصائي الشرحي والموجز. **النتائج والاستنتاج:** أظهرت هذه الدراسة الإستعادية حصول زيادة في الإنتاج البحثي بصورة عامة في العقد الأخير من تأسيس المجلة العربية للطب النفسي وبالأخص في كم الباحثات المتخصصات في الصحة النفسية، نسبة إلى كل الباحثين مع زيادة طفيفة في المقالات المعنية بالصحة النفسية للمرأة العربية، سجلت زيادة لصالح الباحثات من غير الطبيبات في السنين الخمس الأخيرة. يرجح نمو الإنتاج العلمي إلى ديمومة الإصدار والتطور المعلوماتي الحاصل في السنين الأخيرة إلاّ أن الفراغ البحثي في الصحة النفسية للمرأة ما زال جلياً وبحاجة إلى دراسات موسعة.

الكلمات المفتاحية: الباحث العربيات المجلة العربية للطب النفسي

تضارب الاهتمام: لا يوجد

المقدمة

تحتل أبحاث الصحة النفسية حيزاً ضئلاً من مجموع الأبحاث الطبية، بسبب الترهل الحاصل في خدمات الصحة النفسية في معظم بلدان الوطن العربي، كنتيجة لشح الموارد المادية والبشرية وضعف التقنيات البحثية الحديثة، وعجز الميزانيات المخصصة للصحة النفسية عن تقديم مستويات متقدمة من الخدمات الطبية وللبحوث العلمية، فضلاً عن ارتفاع مؤشرات البطالة والأمية وبديهية ازدياد وبائية الاضطرابات النفسية بازدياد الإحتراب و العنف السياسي والطائفي في السنين الاخيرة [1،2] ، تشكل النساء نسبة سكانية عالية ويعتبرن ضحايا مباشرة لهكذا أحداث مما يؤدي الى ارتفاع المراضة النفسية وعلى الأخص اضطرابات القلق والإكتئاب، المعروفة بكونها الأكثر شيوعاً بحسب المقاييس العالمية ، وقد أشارت العديد من الادبيات الطبنفسية العربية إلى ضرورة الإهتمام بالبحث العلمي بوصفه أحد أركان التخطيط الصحي السليم والواعد . [1،2،3] إن التقارير القليلة المتوفرة لا تكشف عن الحجم الحقيقي للمشاكل النفسية التي تكتنف المرأة في المجتمعات العربية، بسبب غياب بأهمية اللجوء للطبيب النفسي، ونقص خدمات الصحة النفسية كمأونوعاً اغلب المجتمعات العربية وبالاخص المناطق الأقل حظاً وكعوامل أضافية: الشعور بالوصمة الإجتماعية وتحميل المرأه مسؤولية كتمان الصراعات العائلية والمحيطية في المجتمعات المحلية والعبء الاكبرمن الموروثات الثقافية والدينية المتمثلة بتأثير العقيدة الإسلامية (دين الأغلبية)،على تفسير الأعراض النفسية وطرق العلاج وأكتساب الشفاء، [4،5] قد يعزى الفراغ الواضح في الدراسات الخاصة بالصحة النفسية للمرأة، إلى قلة العدد الإجمالي للأطباء النفسيين في معظم البلدان العربية قياسألعدد السكان ، حيث يبلغ المعدل العام (0.95 طبيب نفسي/ 100000نسمة) [2،6] أو نقص الاهتمام باجراء دراسات متخصصة بشأن الصحة النفسية للمرأه وفي بلدان عربية كثيرة، يقل عدد المهنيات في الصحة النفسية عن أقرانهن من الرجال . لم تعنى الدراسات القليلة المتوفرة بتحليل أثر الهوية الأنثوية في أنتشار المراضة النفسية في المجتمعات العربية، وعلاقتها بالعوامل الديموغرافية والبيئية وتأثير الشدائد الخارجية من الفقر وسوء المعاملة والعنف داخل المنزل وخارجه، بل لوحظ اكتفاء الباحثين بالإشارة إلى فرق الجنس وبشكل عابر غالباً. خلت أدبيات الصحة النفسية عربيأوعالمياً من أي دراسة تتعلق بحجم العاملات في حقل الصحة النفسية في المنطقة العربية، والطبيبات منهن على وجه الخصوص، سواء في العمل السريري أو البحث العلمي [2،4،6].

سعت هذه الورقة إلى توثيق الإنتاج العلمي للباحثات العربيات في المجلة العربية للطب النفسي خلال مسيرتها البالغة 25 عاماً، بوصفها دورية محكمة للطب النفسي مستمرة الإصدار وذات هوية عربية غير إقليمية [7،8].

الطريقة

استعرضت الباحثة شخصياً كل أعداد المجلة العربية للطب النفسي عن طريق التصفح الألكتروني لموقع المجلة على الشبكة العنكبوتية، وما تيسر من الإصدارات بالصيغة الورقية منذ تأسيسها عام 1989 إلى 2014 والبالغة (50) عدد اخلال 25 عاماً [9]، تم فيها: احتساب العدد الكلي للمقالات والباحثين، حصر المقالات الخاصة بالصحة النفسية للمرأة، حصر العدد الكلي للباحثات وتخصصهن المهني سواءاً كان في الطب النفسي أو غيره من التخصصات. احتسبت أيضاً نسبة تصدر الباحثة أو تفردها للبحث، قياساً إلى العدد الكلي للباحثات، صنفت فترة الإصدار إلى ثلاثة أقسام: العقد الأول 1989-1999، العقد الثاني 1999-2009، والنصف الاول للعقد الأخير 2009-2014.

لغرض التيقن من الهوية الأنثوية والتخصص المهني للباحثات ،تم الإتصال الشخصي ببعض الباحثات عن طريق البريد الالكتروني وأستعراض بعض المواقع الالكترونية العربية المعنية بتقديم الاستشارات النفسية، وأيضاً قائمة الأسماء لأعضاء وعضوات نقابة الأطباء في مصر، لبنان ،الجزائر، الأردن[10]، خصصت خانة (لم يتم التأكد) للباحثين أو الباحثات الذين لم يتم الاستدلال على الهوية الجنسية والتخصص المهني بسبب الإكتفاء باللقب والإشارة إلى الإسم الأول بالحرف وتعذر الإتصال بسبب غياب عناوينهم البريدية أو الألكترونية او تغييرها خصوصاً في الإصدارات المبكرة 1989 -1999. أعيدت عملية حصر وجمع الأعداد والنسب المئوية لثلاث مرات، لاستبعاد عامل السهو. تمت جدولة النتائج ونوقشت النتائج في ضوء المعطيات الإحصائية.

النتائج

نظرة عامة للإصدارات

أظهر التحليل الإحصائي لمجمل الإصدارات وجود (417) مقالة علمية بمعدل (8.34) مقالة لكل عدد، أشترك بتأليفها (828) باحث من كلا الجنسين في اختصاصات الطب النفسي وعلم النفس والإجتماع وتخصصات طبية أخرى بمعدل (16.56) باحث لكل عدد وبمعدل (1.98) باحث لكل مقالة في كل سنين الإصدار، في بداية العقد الأخير 2009-2014، بلغ معدل المقالات والباحثين للعدد الواحد (10.6)، (26.9) تباعاً كما هو مبين في الجدول 1.

جدول 1: توزيع المقالات على إصدارات المجلة العربية للطب النفسي 1989-2014

تاريخ الاصدار	عدد الاصدارات	عدد المقالات	العدد الكلي للباحثين	معدل المقالات/العدد	معدل الباحثين/العدد
1999-1989	20	152	234	7.6	**11.7**
2009-1999	20	159	298	7.95	**14.9**
2014-2009	10	106	296	10.6	**26.90**
المجموع	**50**	**417**	**828**	**8.34**	**16.56**

بلغ مجموع الدراسات المعنية بالصحة النفسية للمرأة العربية 21 مقالة فقط بنسبة (5.04 %) من العدد الكلي للمقالات خلال سنين الإصدار، وبمعدل (0.75) مقالة خلال العقدين الأولين 1989-2009 و(1.2) خلال الخمس سنين الأخيرة 2009-2014 نسبة إلى مجموع الإصدارات، صنفت تلك المقالات كدراسات تخص الصحة النفسية للمرأة اعتماداً على موضوع الدراسة والخلاصة وكون العينة البحثية من نساء المجتمعات العربية.

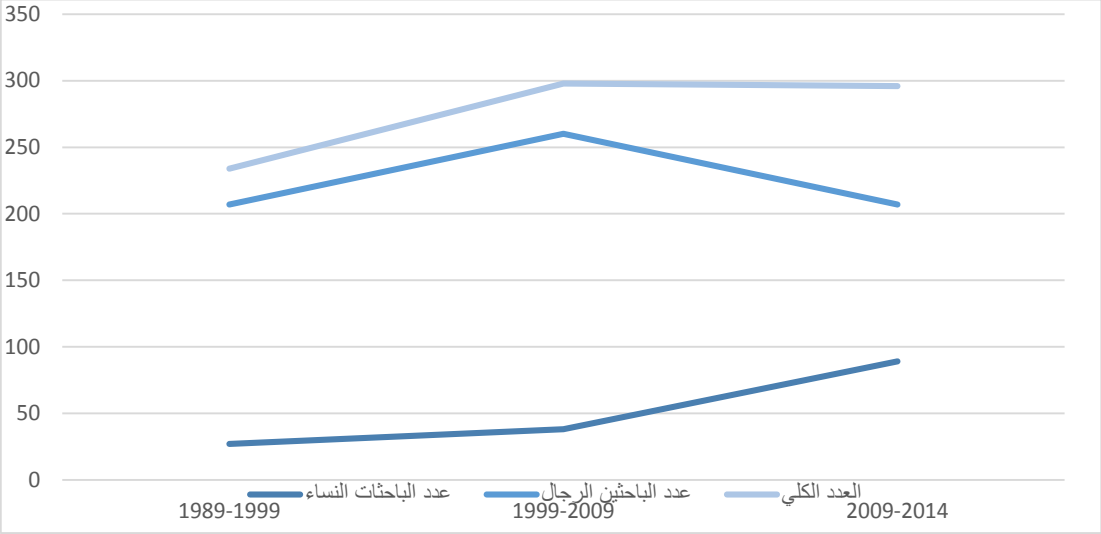
اسهام المرأة كباحثة

يوضح الجدول 2 والرسم البياني 1 ،عدد الباحثات النساء 154 (18.59%) من العدد الكلي للباحثين، وكانت نسبة الباحثات إلى الكل (30.6%) للأعوام الاخيرة 2009-2014 ، كما هو موضح في الرسم البياني 2،ويعد ذو قيمة إحصائية أعلى بكثير من عدد الباحثين الرجال لنفس الفترة الزمنية ,في حين بلغ عدد المتخصصات في الطب النفسي (طبيبات نفسيات) 98 (11.83) من العدد الكلي للباحثين ومثلت الباحثات في التخصصات الأخرى 56 (6.76%) من العدد الكلي للباحثين من كلا الجنسين كونت الباحثة الأولى أو المنفردة نسبة (5.60%) من مجموع الباحثين ، الرسم البياني 3 يوضح أيضاً نسب الطبيبات النفسيات، التخصصات الأخرى وكون الباحثة منفردة او أولى قياساً إلى مجموع الباحثين الكلي.

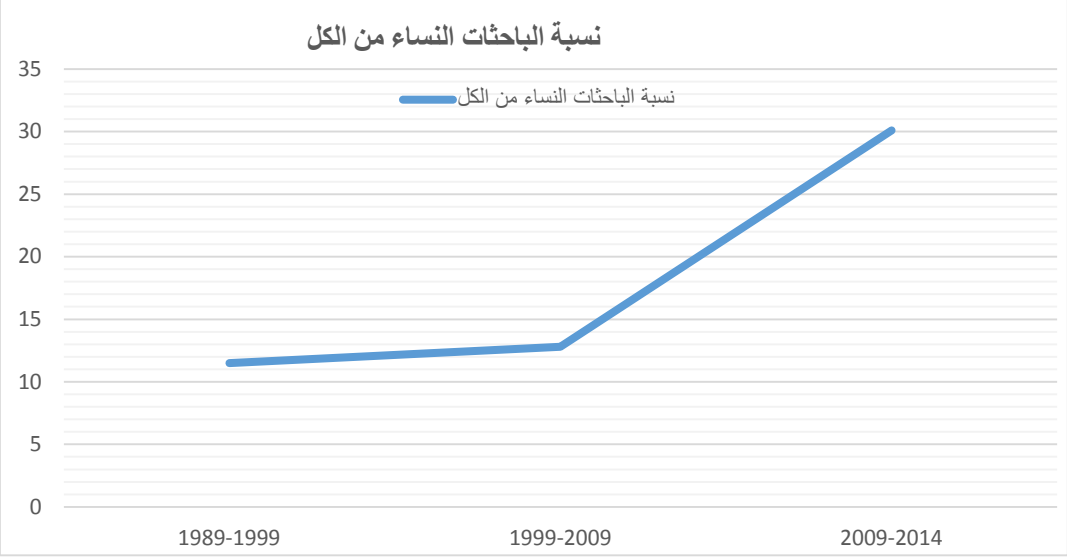
جدول 2: أسهام الباحثات في إصدارات المجلة العربية للطب النفسي منذ تاريخ الاصدار 1989 الى 2014

تاريخ أعداد المجلة	عدد الباحثات النساء	عدد الباحثين الرجال	العدد الكلي للباحثين	طبيبات نفسيات	لم يتم التاكد من الجنس والتخصص	تخصصات اخرى	باحثة اولى، منفردة
1999-1989	27	209	236	19	2	8	**6**
2009-1999	38	260	298	25	3	10	**14**
2014-2009	89	207	296	51	3	33	**27**
المجموع	**154**	**676**	**838**	**95**	**8**	**51**	**47**

الرسم 1: توزيع الباحثين من حيث الجنس خلال سنين إصدارات المجلة العربية للطب النفسي 1989-**2014**



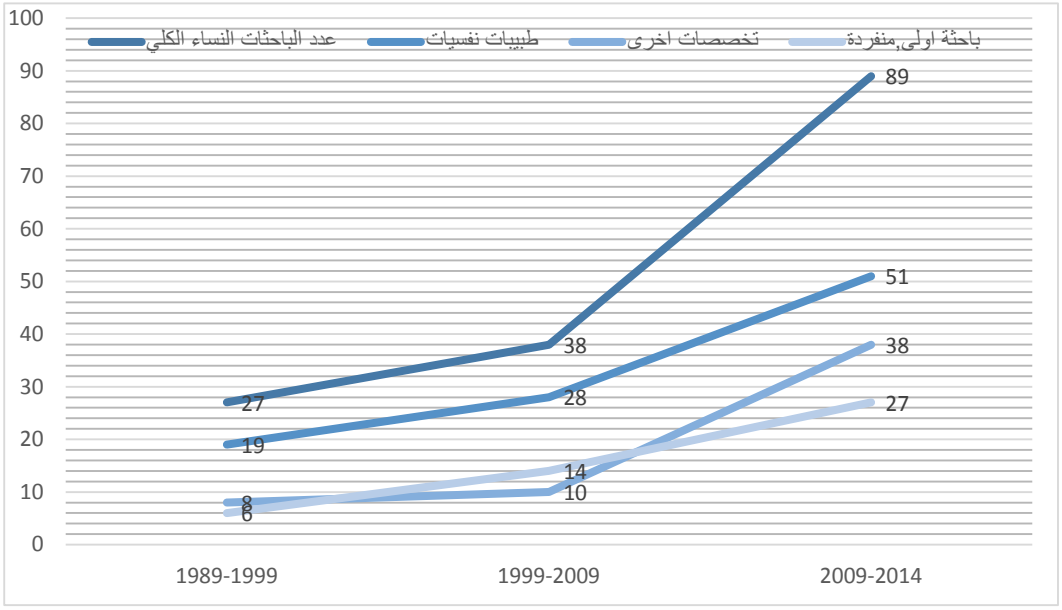
الرسم 2: نسبة الباحثات النساء في المجلة العربية للطب النفسي خلال سنين الاصدار1989-2014



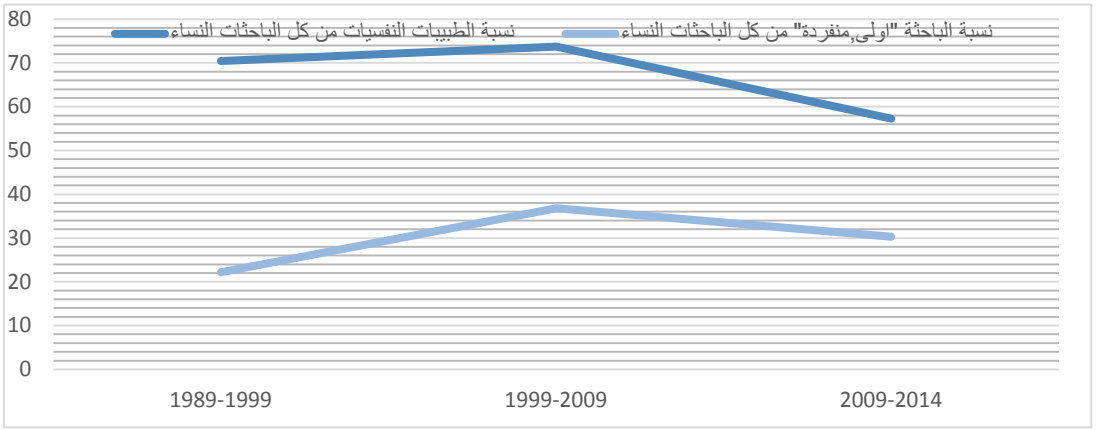
شكلت الطبيبات النفسيات نسبة (61.68%)، والتخصصات الأخرى(33.11%) التي شملت علم النفس، تخصصات طبية غير نفسية، البحث الاجتماعي والاحصاء. من مجموع الباحثات النساء تباعاً، كان للباحثة الأولى أو المنفردة (30.51%) من مجموع الباحثات النساء كما هو مبين في جدول 2 ويوضح الرسم البياني 3 ارتفاع كل القيم الإحصائية لمجاميع الباحثات النساء في منتصف العقد الأخير نسبة إلى مجموع الباحثين من كلا

الجنسين. بينما تنخفض نسبة الطبيبات النفسيات والباحثة الأولى المنفردة لصالح الباحثات النساء في التخصصات الأخرى، وللباحثات في بحوث مشتركة في الخمس سنين الأخيرة 2009-2014 كما هو ملخص في الرسم البياني 4.

الرسم 3: توزيع الباحثات النساء من حيث التخصص المهني والتفرد في النشرنسبة الى مجموع الباحثين خلال سنين أصدار المجلة العربية للطب النفسي 1989-2014



الرسم 4: نسبة الطبيبات النفسيات والباحثة الاولى، منفردة من الباحثات النساء خلال سنين أصدار المجلة العربية للطب النفسي 1989-2014



المناقشة

تعاني الأدبيات الطبية من فجوة علمية كبيرة في موضوع الصحة النفسية للمرأة، ولم تتوفر دراسات معمقة أو على صعيد مجتمعي واسع النطاق، وما توفر كان في مجمله يتناول تأثير الجنس كعامل إحصائي وليس كهدف رئيسي في الدراسة، ولم يتم التركيز بشكل وافي على وبائية الإضطرابات النفسية في صفوف النساء وعلاقتها بالعوامل الإجتماعية والعائلية التي تؤثر في عملية العلاج والشفاء. إلّا ما ندَّر، [4،11] مع الإقرار بدور البحث العلمي في رفع مستوى خدمات الصحة النفسية في المجتمعات العربية، وتعد المجلة العربية للطب النفسي الصادرة من قبل أتحاد الأطباء النفسيين العرب في الأردن بشكل نصف سنوي باللغة الإنكليزية والعربية، أحد الدوريات العربية النفسية المحكمة والمعرفة في الفهرس الطبي للشرق الأوسط، يساهم فيها

استشاريون وأكاديميون في الطب النفسي وعلم النفس من كافة دول المنطقة [1،12،7].

بات من الضروريات أيضاً أن يتم التعرف على حجم المرأة المهنية في حقل الصحة النفسية كطبيبة أو اختصاصية نفسية في ظل غياب التوثيق الرسمي وصعوبات التواصل العلمي بين دول المنطقة، واضعين في نظر الإعتبار كونها أكثر وعياً بواقع مواطناتها في مجتمعها المحلي. [3،4،5]

شملت مجموع الأوراق للباحثين من كلا الجنسين مختلف صنوف البحوث الحيوية الطبية: مراجعة أدبيات سابقة، تسجيل حالة مرضية، تقرير وافي أو مختصر، مواضيع تاريخية، دراسات ميدانية استطلاعية، دراسات استعادية ومقطعية، رسالة إلى المحرر، استعراض كتب وغيرها، وكان لمعدل وجود (1.98) باحث أو باحثة لكل مقالة المغزى المهم في تبوأ المقالات المنفردة مساحة واسعة في الطيف العام لكل الإصدارات ، كما أن أرتفاع المعدل العام لعدد المقالات والباحثين بشكل تصاعدي (10.6)، (26.9) تباعاً خلال منتصف العقد الاخير2009-2014 ، قياساً إلى الإصدارات المبكرة للأعوام 1989-1999، يدل على تطور الإنتاج البحثي للمجلة بشكل عام وزيادة الإقبال على النشر فيها، وقد تعكس زيادة أنتشارها. كان للمقالات المتعلقة بالصحة النفسية للمرأة حصة ضئيلة (5.04%) من مجمل الدراسات المنشورة، ساهمت الباحثات بنسبة الثلث منها فقط والباقي للباحثين الرجال، تنوعت مواضيعها بين: اضطرابات الشهية والوزن، اضطرابات الطمث، الإضطرابات المتعلقة بالحمل والولادة، مشاكل العلاقة الزوجية وبشكل أقل: الجوانب الشرعية ووبائية بعض الأمراض النفسية في عينات بحثية من النساء، ودراسة واحدة حول علاقة الحالة الإجتماعية بالمراضة النفسية في عينة نسائية واسعة الطيف. [11] وقد تكون لزيادة عدد تلك المقالات في منتصف العقد الاخير (1.2) قياساً الى (0.75) المسجل سابقاً، مؤشراً لزيادة الإهتمام بهذا الموضوع إلا أنه لا يمثل القيمة الإحصائية لقلة القيمة الرقمية للنسب.

من الناحية الإحصائية تعد الزيادة المضطردة في عدد الباحثات النساء قياساً إلى العدد الكلي في الخمس سنوات الاخيرة 2009-2014 مؤشراً واضحاً لزيادة نسبة مشاركة الباحثة العربية عن السنين السابقة، وقد يعكس أيضاً ازدياد الإهتمام بالنشر في المجلة العربية بالذات. على الرغم من كون المتخصصات في الطب النفسي يمثلن (11.38 %) فقط من مجموع الباحثين ككل ،إلا أن هذه النسبة يعتد بها، سيما أنهن يشكلن غالبية الباحثات النساء (63.63%)، وقد تعزى هذه الأغلبية إلى كون المجلة صادرة باللغة الإنكليزية بشكل رئيسي ،مما يسهل مهمة التأليف والنشر للطبيبات أكثر من الباحثات في التخصصات الأخرى، عدا عن كونهن يمتلكن المعرفة الطبية الدقيقة ويعملن في مواقع أكاديمية واستشارية حكومية، وعلى احتكاك سريري مباشر مع المراجعين من كلا الجنسين، ويبقى إثبات صحة هذا التخمين مرهوناً بإجراء دراسات موسعة مستقبلاً ، كونت الباحثة الأولى (الرئيسية) أو المنفردة ما يقارب الثلث (30.51) من مجموع الباحثات، وهي نسبه يعتد بها إحصائياً وتشير إلى الدور القيادي للمرأة الباحثة في اختيار الموضوع واستنباط النتائج فكرياً وعلمياً.

لوحظ ظهور انخفاض في نسبة الطبيبات النفسيات من مجموع الباحثات النساء في الخمس سنوات الأخيرة 2009-2014 مما يؤشر على تزايد النشاط البحثي للمتخصصات في علم النفس أو علم الإجتماع أو فروع الطب الأخرى، كذلك انخفاض نسبة كون الباحثة رئيسية أو منفردة من مجموع الباحثات أيضاً مما يعني زيادة في البحوث المشتركة لنفس الفترة الزمنية، قد تعكس التوجه نحو نشر الدراسات الموسعة أو ذات الطابع الجماعي الذي يشترك فيه فريق بحثي من عدة تخصصات، إلا أن هذه الملاحظة بحاجة إلى التمحيص في دراسات مستقبلية مماثلة. [12]

الاستنتاجات

الدراسات الخاصة بالصحة النفسية للمرأة شحيحة وغير وافية في المجلة العربية للطب النفسي، وغالباً ذات طيف بحثي ضيق، شاركت الباحثة العربية بشكل جلي في نشريات المجلة العربية للطب النفسي، بأغلبية للمتخصصات في الطب النفسي وبنسبة يعتد بها للبحوث المنفردة مع زيادة في الإنتاج البحثي للمجلة ككل وللباحثات النساء في منتصف العقد الأخير 2009-2014، ويعتقد أن ديمومة الإصدار وتيسر وسائل النشر والإتصال الألكتروني قد يكون سبباً رئيساً في هذا التطور والإنتشار. توصي هذه الورقة بالتشجيع على إجراء الدراسات في مجال الصحة النفسية للمرأة في بلدان الوطن العربي لملء الفراغ العلمي وتدعو المتخصصات في الطب النفسي إلى تولي الريادة في مشاريع بحثية واسعة النطاق مستقبلاً. تتمنى هذه الورقة أيضاً على الباحثين أدراج الاسماء والتخصصات المهنية باللغة العربية للتوثيق المستقبلي.

صعوبات الدراسة

واجهت عملية جمع المعلومات صعوبات الإتصال بالباحثين لعدم وجود عناوين الكترونية وكون عناوينهم المهنية ناقصة أو تغيرت بفعل الزمن، كذلك غياب الأسم الأول أو التخصص المهني لبعض الباحثين باللغة العربية، أدى إلى صعوبة التعرف على الهوية الجنسية خصوصاً في الإصدارات المبكرة.

شكر وتقدير

جزيل الشكر والإمتنان للدكتور أحمد النعيمي الأستاذ المساعد في قسم طب المجتمع في كلية الطب-جامعة بغداد لجهوده القيمة في إجراء التحليل الإحصائي.

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Abstract

Objective: The current paper aims to investigate the contribution of women authors in the field of mental health research by reviewing a well-known peer reviewed psychiatric journal, The Arab Journal of Psychiatry (AJP), over a period of 25 years analyzing all literature issued by women researchers on mental health. **Method**: A retrospective review of all literature in the AJP from 1989 to 2014 was conducted by thorough manual search through the journal website and hard copies; all women authors were identified by names and their professional specialty. An identical search method for papers focusing on women's mental health was used. **Results and Conclusions:** The current paper reflects the size and professional profiles of women authors in mental health research in the Arab world through the AJP. There have been an increased number of published articles in general during the last decade with many more women authors in comparison to their male peers. The AJP published more papers focusing on women's mental health in the Arab countries. Female psychiatrists took the lead in authorship, but have not published more articles within the last five years than their male counterparts. This evolution may be the result of the continuity of the AJP aided by the recent advances in accessing data and communication online. Studies concerned with the mental health of Arab women remain scarce. More attention and efforts is needed to address this.

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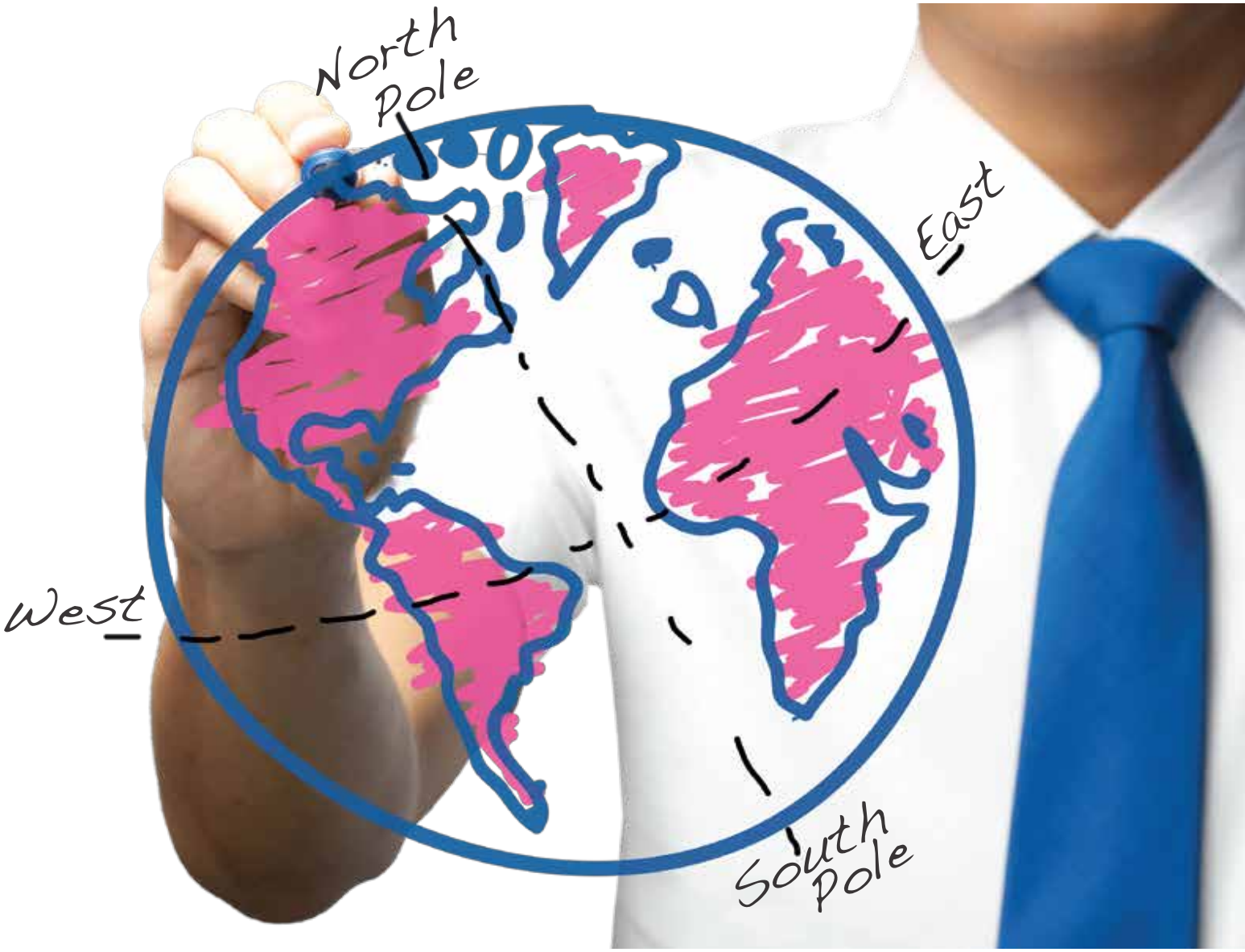
Seroquel XR™
quetiapine



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Abbreviated Prescribing Information

Indication: Schizophrenia including: preventing relapse in stable schizophrenic patients who have been maintained on Seroquel XR Bipolar disorder including: manic episodes associated with bipolar disorder, major depressive episodes in bipolar disorder, preventing recurrence in bipolar disorder in patients whose manic, mixed or depressive episode has responded to quetiapine treatment. Contraindications: hypersensitivity to the active substance or to any of the excipients of this product. Concomitant administration of cytochrome P450 3A4 inhibitors, such as HIV - protease inhibitors, azole- antifungal agents, erythromycin, clarithromycin and nefazodone, is contraindicated. Special warnings and precaution for use: Suicide / suicidal thoughts or clinical worsening; Somnolence; Cardiovascular disease; Cerebrovascular disease; Conditions predisposing to hypotension; Family history of QT prolongation; Medicines know to increase QTc interval; Concomitant neuroleptics; Congenital long QT syndrome; Congestive heart failure ; Heart hypertrophy; Hypokalaemia; Hypomagnesaemia; Seizures; Extrapyramidal symptoms Tardive Dyskinesia; Neuroleptic Malignant Syndrome; Severe neutropenia; Interactions: Hyperglycaemia; Lipids; Withdrawal; Elderly patients with dementia-related psychosis; Hepatic effect; Dysphagia; Aspiration pneumonia; Venous thromboembolism; Lactose intolerance; Children and adolescents (10 to 17 years of age) Interactions: Centrally acting drugs and alcohol; Grapefruit juice; Hepatic enzyme inducers (carbamazepine and phenytoin). Adverse reactions: the most commonly reported Adverse Drug Reactions (ADRs) with quetiapine are somnolence, dizziness, dry mouth, mild asthenia, constipation, tachycardia, orthostatic hypotension and dyspepsia. As with other antipsychotics, weight gain, syncope, neuroleptic malignant syndrome, leucopenia, neutropenia and peripheral oedema, have been associated with quetiapine. Posology and method of administration: Seroquel XR should be administrated once daily, without food (at least one hour before a meal). The tablets should be swallowed whole and not split, chewed or crushed. Adults: for the treatment of schizophrenia the daily dose at the start of therapy is300 mg on day 1 and 600mg on day 2. The recommended daily dose is 600 mg. for the treatment of manic episodes associated with bipolar disorder the daily dose at start of therapy is 300 mg on day 1, 600mg on day 2 and up to 800 mg after day 2 for the treatment of depressive episodes associated with bipolar disorder Seroquel XR should be administrated once daily at bedtime. The total daily dose for the first four days of therapy is 50 mg (day 1), 100mg (day 2), 200mg (day 3) and 300mg (day 4). The recommended daily dose is 300 mg. for preventing recurrence in bipolar disorder, for prevention of recurrence of manic, depressive or mixed episodes in bipolar disorder, patients who have responded to Seroquel XR for acute treatment of bipolar disorder should continue on Seroquel XR at the same dose administrated at bedtime. Switching from seroquel immediate-release tablets: For more convenient dosing, patients who are currently being treated with divided doses of immediate release Seroquel tablets (Seroquel®) may be switched to Seroquel XR at the equivalent total daily dose taken once daily. To ensure the maintenance of clinical response, a period of dose titration may be required.

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