Research Paper:
Depression, Anxiety, Psychosomatic Symptoms, and Perceived Social Support in Type D and Non-type D Individuals

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ABSTRACT

Objective: This study examines depression, anxiety, psychosomatic symptoms, and perceived social support among type D and non-type D individuals.

Method: A total of 300 individuals aged 18 to 40 years were recruited in the investigation. We used the distress personality scale (DS 14), Pakistan anxiety and despondency scale, psychosomatic symptoms, and perceived social support scales to obtain the study data. The study participants were divided into Type D (n=166) and non-Type D individuals (n=134) based on their DS 14 cut-off scores. In this descriptive study, a random cluster sampling technique was utilized to choose the samples. The study was conducted from September to December 2017. Data analysis was performed utilizing independent samples t-test and regression analysis.

Result: The recurrence of the Type D personality was 55%. Results indicated a considerable difference between Type D and non-Type D personality on depression, anxiety, and psychosomatic side effects (P < 0.001 for all side effects). The findings also suggest that Type D individuals perceived less social support from family, friends, and significant others.

Conclusion: People with type D character qualities show more depression, anxiety, psychosomatic symptoms, and less perceived social support when compared with non-Type D people.

Extended Abstract

Type D personality is characterized by high scores in two areas: tending to encounter increasingly negative feelings (negative affectivity) and social inhibition of the feelings. Negative affectivity makes a person experience adverse feelings, for example, depressed mood, anxiety, outrage, and hostile feelings [1]. Conversely, emotional inhibition is characterized by maintaining a strategic distance from potential dangers ensuring social collaborations, for example, objection or absence of recompensating by others [2]. Type D personality is commonly known as a risk factor for challenging health consequences, wellbeing related to the quality of life (QOL), different types of distresses such as grief, anxiety, and post-traumatic stress [3]. Previous studies have proposed that type D personality may anticipate the onset [4] and persistence of depressive symptoms in patients with coronary illnesses [5]. Besides, the relationship between depressive symptoms and type D personality in the diabetic community and general population has also been noticed [6, 7]. A study using regression analysis on patients with heart failure demonstrated that type D personality predicts the mental and physical status of the patients [8].

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Symptoms and Related Disorder (SSRD) is a person’s tendency to understand and manifest psychological distress in physical form and to seek medical help to cure these symptoms [9]. Pain, panting, numbness, gastric issues have no clinical reasons to address. After doing a complete medical examination, one-third of symptoms remain medically unexplained [10]. A study was conducted in Iran to determine the relationship between somatic signs, mental health, and personality characteristics. The study showed a significant connection of somatic symptoms with mental health and personality characteristics [11]. A longitudinal study conducted in the Netherlands reported that individuals with somatic symptoms and related disorders with Type D personality got high scores on depression and anxiety [12]. Vogel found out the negative affectivity, Type D personality, and QOL had relationships with poor outcomes of total knee arthroplasty [13].

Social support is defined as behavioral support received from others, which served as a safeguard for many psychiatric illnesses/problems. There are three types of social support: 1) objective, 2) subjective, 3) utilization support. Objective support is known as available support; subjective support is defined as perceived support, which refers to contentment and satisfaction of support received from others. Support utilization is also known as enacted support, the term defined as any kind of support, e.g., emotional, physical, and informational support present [16]. Polman, Borkoles, and Nicholls [17] suggested no significant defensive role of perceived social support on psychological distress and Type D personality. While William and Wingate [18] reported a partial mediating role of social support with perceived stress and Type D personality. Another study on Type D personality may lead to low self-efficacy and social support in Type 2 diabetes mellitus in China [14].

In Pakistan, the concept of distressed personality is neither much known nor has been intensively investigated. Therefore, the present study aimed to explore the relationships between distressed personality, depression, anxiety, and somatic symptoms. The study also intended to explore the mediating role of perceived social support with Type D, psychosomatic symptoms, and depressive symptoms.

### 2. Methods

Three hundred participants aged 18 to 40 years (Mean±SD: 22.25±2.66 years) were included in the study from different departments of Shaheed Benazir Bhutto Women University and University of Peshawar. Both men (n=150) and women (n=150) equally participated in the study from March to September 2017. Personal information included age, sex, education, marital status, history of physical illness, and previous psychiatric illness. To measure distressed personality, we used a self-administered questionnaire comprising two subscales of Negative Affectivity (NA) and Social Inhibition (SI) [3]. Both subscales have 7 items scored on a 5-point Likert-type scale. The total score on each subscale ranges from 0 to 28, where higher scores indicate higher NA/SI. The Cronbach α reliability of the scale in the present study was calculated as 0.80. To measure depression and anxiety symptoms, we used an indigenous scale developed by Mumford et al. [19]. This scale has two subscales of depression and anxiety, each with 15 items. The α reliability values of the depression and anxiety scales in the present study were 0.80 and 0.80, respectively. The psychosomatic symptoms scale consists of 5-item self-report questions. They were scored on a 5-point Likert scale that measures headache, stomach ache, feeling of nervousness, feeling of irritation, and sleep problems. The scale shows good a reliability on the present sample as 0.87 [20]. Zimet, Powell, Farley, Werkmann, and Berkoff [21] developed a multidimensional Perceived Social Support Scale (PSSS). A self-report questionnaire consists of 12 items with three subscales that assess support awareness from friends, family, and significant others. Each subscale has 4 items scored on a 7-point Likert scale. The total score ranges from 0 to 84, with a high score indicates higher PSSS. In the present study, the Cronbach α was estimated as 0.94.

In this descriptive study, we contacted the head of different departments of Shaheed Benazir Bhutto Women University and University of Peshawar (Pakistan) to explain the nature and purpose of the study. To observe ethical concerns, we assured the respondent of their anonymity and the use of the data for academic purposes only. The study participants were volunteers and have the right to withdraw from the study at any stage. The questionnaire booklet comprised the demographic information sheet, Pakistan anxiety and depression scale, psychosomatic symptoms scale, PSSS, and DS14. They were successfully administered to all participants after taking their informed consent. Based on cut-off scores obtained on DS 14, two groups were formed: Type D (n= 166) and non-Type D (n= 134) individuals. In the present study, a random cluster sampling technique was used.

### 3. Results

A total of 300 samples participated in the study. Among these people, 71% were 18 to 23 years old; 5% were married; 85% belonged to middle socioeconomic status, and 71% were graduate students. All variables of interest show a significant correlation at 0.01 level (Table 1). To test the study hypothesis, we performed the independent samples t-test. The results show that type D and non-Type D personalities were significantly different regarding depression,
anxiety, psychosomatic symptoms, and distress scale (Table 2). The t-test was also carried out to examine the difference between Type D and non-Type D individuals on perceived social support (Table 3).

To test the mediating effects of PSS on the relationship between distressed personality and psychosomatic symptoms, we performed the mediating analysis. Regression analysis showed that distressed personality significantly predict psychosomatic symptoms ($\beta = -0.065$, $t_{298} = -8.46$, $P<0.001$) and the mediator significantly predicted PSS ($\beta = 1.083$, $t_{298} = -12.16$, $P<0.001$). The analysis results demonstrated the mediating effects of PSS in the relationship between distressed personality and psychosomatic symptoms. A further mediation analysis was conducted using depression as a dependent variable. Regression analysis showed that type D personality significantly predicted depression ($\beta = -0.095$, $t_{298} = -6.498$, $P<0.001$). Mediation analysis showed that PSS mediated the relationship between distressed personality and depression.

According to Table 2, significant t differences on psychosomatic (t = 11.15, P<0.001), perceived social support (t = -23.88, P>0.001), depression (t = 9.26, P<0.001), anxiety (t = 13.33, P>0.001) was found between type D and non-Type D individuals.

4. Discussion and Conclusion

The current study’s findings show that Type D personality has a relationship with depression, anxiety, and psychosomatic symptoms (Table 2). The observed relationship of Type D personality with depression is consistent with other studies. Doyle, McGee, Delaney, Motterlini, and Conroy [5], based on a longitudinal study, concluded that Type D is a probable cause of depression. Van Dooren et al. [22] reported a high-risk factor of Type D personality for depression. Multivariable regression analysis of the study further suggests the association of Type D personality with depression, inflammation, and endothelial problems. Another study was conducted to investigate the independent relationship of Type D personality with social and generalized anxiety in a large general population (N= 2475). The study results indicate that Type D individuals manifest both social and generalized anxiety [23]. Tasdelen and Yage [24] investigated depression, Type D personality, somatosensory amplification level, childhood trauma in panic disorder patients. The study concluded that individuals with panic

| Variables | Type D (N=166) | Type D (N=134) | t   | 95%CI | P  | Cohen’s B |
|-----------|----------------|----------------|-----|-------|----|-----------|
| Psycosomatic | 8.43±1.37 | 6.65±1.36 | 11.15 | 1.46 | 2.08 | 0.001 | 1.29 |
| Distress P | 17.74±5.38 | 36.36±7.58 | -23.88 | -20.09 | 17.03 | 0.001 | -2.76 |
| Depression | 23.60±2.29 | 20.60±3.13 | 9.26 | 2.36 | 3.64 | 0.001 | 1.07 |
| Anxiety | 25.88±3.31 | 20.07±3.37 | 13.33 | 4.41 | 5.94 | 0.001 | 1.54 |

LL: Lower Limit; UL: Upper Limit; df = 298.
disorder also show symptoms of depression, anxiety, and Type D childhood trauma. However, no relationship has been found between panic disorder and somatic magnification. Besides, the association of depression and anxiety with Type D personality and psychosomatic symptoms have also been noticed in the distressed population. The findings of the present study also show psychosomatic symptoms in the Type D individuals as compared to non-Type D. The present study results are in line with the previous studies. A longitudinal cohort observational study was conducted that a somatosensory-related disorder shows 63% prevalence of Type D personality features. Condén, Leppert, Ekselius, and Åslund [25] conducted a study and argued that adolescent with Type D personality shows more psychosomatic and musculoskeletal symptoms. In addition, our study explored the relationship between Type D personality and different kinds of Perceived Social Support (PSS) from family, friends, and significant others. Table 3 suggests that Type D individuals perceived less social support from friends, family, and significant others compared to non-Type D people. These findings indicate that distressed personality traits (NA, SI) significantly affect all dimensions of PSS. The current results are in line with the previous study conducted on the general population in Germany, which reported a negative correlation between Type D personality and social support [26]. To see the relationships between Type D personality, psychosomatic symptoms, and depression in more detail, the mediating effect of Type D personality was examined using the regression analysis. The results revealed that we should increase perceived social support in Type D individuals to minimize depression and psychosomatic symptoms. A study was conducted on the relationship between Type D personality, QOL, and coronary heart disease. The findings concluded that Type D personality might affect health-related QOL in coronary heart disease. The study also reported the mediating role of depression, anxiety, and social support [27].

Based on the present study results and supporting evidence from previous studies, we can safely assume that Type D personality traits may be the key factor of developing not only depression, anxiety, and psychosomatic disorders but also different chronic illnesses, such as diabetes and heart-related problems. Type D personality may also create management problems of these medical diseases. For example, Spek et al. [28] reported that Type D individuals have to face difficulties in coping and managing stress in diabetes. Therefore, effective therapeutic intervention to improve perceived social support may lower depression, psychosomatic symptoms, and other medical illnesses associated with Type D individuals.

Altogether, this study found that a person with Type D personality shows more anxiety, depression, and psychosomatic symptoms. The study also concluded that Type D individuals perceived less social support from family, friends, and significant others than non-Type D individuals.

In the present study, the authors used a homogenous and small-size sample. In future studies, it is recommended that results be inferred from heterogeneous and large-size samples. It is also recommended to make psychiatric diagnoses and personality assessments among the student population to get better conclusions.

Ethical Considerations

Compliance with ethical guidelines

All ethical principles are considered in this article. The participants were informed about the purpose of the research and its implementation stages. They were also assured about the confidentiality of their information and were free to leave the study whenever they wished, and if desired, the research results would be available to them.

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Table 3. Mean, standard deviation, and t values showing difference between type D and non-type D personalities on perceived social support scale

| Variables          | Mean±SD Non-Type D (n=134) | Mean±SD Type D (n=166) | t  | 95% CI LL | 95% CI UL | P     | Cohen's B |
|--------------------|-----------------------------|------------------------|----|-----------|-----------|-------|-----------|
| Friends            | 21.64±6.67                  | 15.48±7.87             | 7.94 | 4.47      | 7.83      | 0.001 | 0.844     |
| Family             | 23.14±5.43                  | 16.05±7.64             | 9.05 | 5.55      | 8.03      | 0.001 | 1.06      |
| Significant others | 19.96±7.11                  | 14.38±7.51             | 3.73 | 3.9       | 7.25      | 0.373 | 0.763     |
| MDPSS (Total)      | 64.54±16.09                 | 45.92±21.05            | 8.43 | 14.27     | 22.95     | 0.001 | 0.993     |

LL: Lower Limit; UL: Upper Limit; df =298.
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Authors contributions

Both authors equally contributed to preparing this article.

Conflicts of interest

The authors declared no conflict of interest.
مقاله به‌عنوان:
افسردگی، اضطراب، علائم روان‌تنه و حمایت اجتماعی ادراک‌شده در افراد نوع D و غیرنوع D

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پژوهش‌شناسی:
این مطالعه افسردگی، اضطراب، نشانه‌های روان‌تنه و حمایت اجتماعی ادراک‌شده را در بین افراد نوع D و غیرنوع D بررسی می‌کند.

هدف:
این مطالعه افسردگی، اضطراب، نشانه‌های روان‌تنه و حمایت اجتماعی ادراک‌شده را در بین افراد نوع D و غیرنوع D بررسی می‌کند.

مواد و روش‌ها:
شرکت کنندگان در این مطالعه به دو گروه استیصال پاکستان، آن‌ها بود. در این مطالعه توصیفی از روش نمونه‌گیری خوشه‌ای تصادفی برای 55 نفر در کلاس بزرگ مطالعه و 33 نفر در کلاس کوچک مطالعه استفاده شد.

نتایج:
نتایج نشان داد که بین شخصیت نوع D و غیرنوع D دارای تفاوت زیادی در افسردگی، اضطراب و عوارض جانبی روان‌شناختی وجود دارد.

کلیدواژه‌ها:
افسردگی، اضطراب، علائم روان‌تنه، حمایت اجتماعی.
 afrآور و عصبیت بود. نمره کل در هر یک از دو خرده مقیاس افسردگی و اضطراب استفاده شد.

لیکرت ساخته شد. همکاران (19) مقیاس‌های افسردگی، اضطراب و حمایت اجتماعی در دیابت نوع 1 و 2 مطالعه شرکت کردند. اطلاعات سیصد نفر شرکت کننده برای مطالعه استفاده شد. سه نوع حمایت اجتماعی تعریف می‌شود که شکل حمایت اجتماعی در شرکت‌کننده‌های دیابتی مطرح می‌شود.

بیشترین تأثیر منفی تیپ شخصیتی D و آزمایش (17) با نتیجه شیفت آنورپلاستی قهوه‌مرطوبی مربوط به تغییر سیر (19) و احتمال بهبود سیر و فعالیت سیستم ایمنی بدن را افزایش می‌دهد. واقعیت این امر باعث شد که این پژوهش از سنجش و بررسی تاثیر شخصیت بر روی تغییرات بدنی و روانی در افراد مبتلا به دیابت نوع 1 و 2 استفاده شود.

در طول دوره 4 ساله با میانگین انحراف معیار 150 ± 214، روان پزشکی عمل می‌کند و با توجه به افراد از ترکیب تیپ شخصیتی دارد. در حالی که ویلیام و وینگمیت اشاره به افرادی که داشته‌اند سیستم تیپ شخصیتی دارد و در بیماران دیابت نوع 1 و 2 وجود دارد.
در مطالعه حاضر، ۲۴۳ نفر حاضر به اجرای آزمون‌های اولیه شدند که از آنها ۱۹۹ نفر به انجام پرداختن به نظر بود. نتایج نشان می‌دهد که شخصیت تیپ پریشان به طور معنی‌داری رابطه دارد با افسردگی، اضطراب و علائم روان تنی. به‌طور مشابه، کاهش معنی‌داری در حمایت اجتماعی در مورد افراد نوع غیرنوعی حس شده است.

جدول D. مقایسه بین نوع غیرنوعی D و D از افسردگی به عنوان متغیر وابسته انجام شد. تجزیه و تحلیل در رابطه بین شخصیت پریشان و علائم روان تنی، میزان اضطراب و علائم روان تنی را جاده جزیی و تحلیل بخش‌گرایی و پیش‌گرایی با استفاده از آزمون‌های چند نفری و سنجش‌های پذیرشی و تجزیه و تحلیل و رگرسیون نشان داد که نوع D به طور قابل توجهی به شخصیت پریشان را می‌تواند، با مقیاس پریشانی‌شناختی: مقياس اضطراب و در پس-نی‌پایان، مقیاس CLI/LLQ، پس از انفعال افسردگی پیش بینی کند.

### جدول 1: مقایسه بین نوع غیرنوعی D و D از افسردگی

| Cohens d | p  | دیجینیا کانفیدانس سی | میانگین کانفیدانس سی | ردیابی | دیجینیا کانفیدانس سی | میانگین کانفیدانس سی | ردیابی |
|----------|----|---------------------|---------------------|--------|---------------------|---------------------|--------|
|          |    |                     |                     |        |                     |                     |        |
|          |    |                     |                     |        |                     |                     |        |

### جدول 2: مقایسه میانگین اضطراب و طیف‌گرایی بین نوع D و غیرنوعی D از مقياس حسابی اجتماعی مربوط

| Cohens d | p  | دیجینیا کانفیدانس سی | میانگین کانفیدانس سی | ردیابی | دیجینیا کانفیدانس سی | میانگین کانفیدانس سی | ردیابی |
|----------|----|---------------------|---------------------|--------|---------------------|---------------------|--------|
|          |    |                     |                     |        |                     |                     |        |
|          |    |                     |                     |        |                     |                     |        |

### پایان نکته

نتایج نشان داد که شخصیت تیپ پریشان به طور معنی‌داری رابطه دارد با افسردگی، اضطراب و علائم روان تنی. به‌طور مشابه، کاهش معنی‌داری در حمایت اجتماعی در مورد افراد نوع غیرنوعی حس شده است.
می‌توان با خیال راحت فرض کرد که ویژگی‌های شخصیت نوع افسردگی را تا تشکیل می‌دهند. افزایش ریسک و نفوذی در واقعیت شخصیت نوع افسردگی، اضطراب و آلودگی از سوی شخصیت نوع افسردگی به شکل مستقل یا متناسب با عنصر بهبود ویژگی‌های شخصیت نوع افسردگی، تأثیر مستقل و بهبود شخصیت نوع افسردگی را نشان می‌دهد.

با این حال، دیگری اضطراب اجتماعی برای بررسی پیوند مستقل شخصیت از نوع افسردگی، نشان می‌دهد که افراد نوع افسردگی اضطراب اجتماعی را نشان می‌دهند.

پیشانی‌های دیگر نشان می‌دهد که ویژگی‌های شخصیت نوع افسردگی، اضطراب و آسیب‌های اندوتلیال و آسیب‌های ارتباطی از نوع افسردگی، نشان می‌دهند که در افراد نوع افسردگی، ویژگی‌های شخصیت نوع افسردگی، اضطراب و آسیب‌های اندوتلیال و آسیب‌های ارتباطی از نوع افسردگی، دچار آسیب دیدگی از نوع افسردگی که می‌توان با خیال راحت فرض کرد که ویژگی‌های شخصیت نوع افسردگی، اضطراب و آلودگی از سوی شخصیت نوع افسردگی به شکل مستقل یا متناسب با عنصر بهبود ویژگی‌های شخصیت نوع افسردگی، تأثیر مستقل و بهبود شخصیت نوع افسردگی را نشان می‌دهد.

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