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Association between distress of infertile women and patient centered care in fertility clinic at castle street hospital Sri Lanka

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Abstract

Purpose of this study was to examine the relationship between patient centered care (PCC) and distress among infertile women visiting the Fertility Clinic at Castle Street Hospital. Further, the level of distress based on demographic factors such as education level, age, occupation, income level and period of marriage was planned to identify. Sample size was 393 infertile women visited the Fertility Clinic at Castle Street Hospital. The infertile women with lower level of education, lower income level, older age and longer married life without children were found to be highly distressed. Further, there was no significant relationship between the PCC and distress level among infertile women. The distress level of infertile women visiting Castle Hospital Sri Lanka cannot be reduced through PCC initiatives in the hospital and the factors of age, educational level, family income level, duration of married life and employment could have determined the level of distress.

Keywords: Distress; Infertile Women; Patient Centered Care; Hospital

1 Introduction

Millions of couples throughout the world struggle with infertility, which keeps them from having the children they need [1] [2] [3]. Sri Lanka is one of several civilizations where having children is highly cherished and seen as a necessary aspect of life. However, in society, infertility has long been stigmatized as a personal "failure" and an unwelcome topic. According to Wickramasekara, (2021), [4] the social concept of infertility is frequently related with one's failure to conceive, and there is little research on the social elements of infertility in Sri Lanka. Infertile people, especially women, have become socially stigmatized as a result of this notion in Sri Lanka. Infertile women experience severe social prejudice; 87.5% of the women questioned in the study reported facing it from their extended relatives, compared to 68% of males who were discovered to be infertile [4]. This showcases a severe social issue which has resulted in negative mental conditions among the infertile couples in Sri Lanka.

Patient-centered care (PCC) in the healthcare field refers to the delivery of care that aligns with patients' values, needs, and preferences [5]. It is achieved when healthcare providers engage patients in discussions and decisions regarding their healthcare. PCC, which involves actively involving patients and their families in healthcare decision-making and treatment, has gained widespread acceptance and is advocated in various healthcare settings for different patient populations [6]. The Patient Centered Clinical Method recognizes that patient-centeredness involves understanding patients' experiences with illness and disease, as well as considering their overall well-being [7] [8]. This study was

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conducted at Castle Street Women's (Teaching) Hospital, a fertility clinic in Sri Lanka. By exploring the relationship between distress and PCC, the research can provide insights into the quality of healthcare services provided to infertile women in the clinic. Hence, the purpose of this study is to examine the relationship between PCC and distress among infertile women in Sri Lanka with special references to the couples who visit Castle Street Women's (Teaching) Hospital. The findings can contribute to improving healthcare services, challenging societal norms, and promoting PCC to support individuals and couples experiencing infertility. Further, the secondary objective of this study was to identify the level of distress among infertile women based on their age, educational level, family income, duration of married life and their occupation.

2 Literature Review

2.1 Patient Centered Care (PCC)

Measurement of PCC is critical in assessing its association with the distress level of infertile women [9]; [10] There are several studies being done to analyze the PCC in different clinical settings. At the organizational level, PCC refers to the qualities that the healthcare system as a whole should have [11]. This encompasses elements such as the ease of access to care, the structure of the caregiving process, and the general patient experience in the healthcare environment [12]. The Picker Institute has created a thorough strategy for PCC that combines the organizational and interpersonal facets. They identified eight care aspects that are crucial for delivering PCC through the use of focus groups and literature reviews [13].

Accessibility: Ensuring that patients have easy access to healthcare services while considering location, appointment availability, and timely access to care into consideration [14].

Respect for patients' choices, needs, and values: Appreciating and respecting each patient's uniqueness, as well as their values, convictions, and particular requirements [15]. Patient participation in decision-making, respect for their autonomy, and individualized treatment are all part of this [16].

Communication, education, and information: Giving them precise information about their disease, available treatments, and care procedures [17]. Active listening, resolving patient concerns, and ensuring that patients are knowledgeable about their treatment are all components of effective communication.

Family and friend involvement: Understanding the value of include the patient's family and close friends in their treatment process [18]. This aspect focuses on the patient's support system's participation and collaboration in decision-making and care planning.

Continuity and transition: Ensuring seamless changes in healthcare locations or providers and continuity of treatment for patients [19]; [18]. In order to offer seamless care and prevent gaps or disturbances in the patient's treatment, this calls for effective coordination and communication among healthcare providers.

Fostering cooperation and coordination: Coordination among healthcare professionals and services engaged in a patient's care [20]. To provide a thorough and holistic approach, this component highlights the significance of integrating treatment across various providers and venues [21].

Physical comfort: This involves providing patients with a secure and pleasant environment, attending to their bodily requirements, controlling pain, and guaranteeing their physical well-being throughout the course of treatment [18]; [22].

Emotional support and alleviation of fear and anxiety: Providing patients with emotional support, empathy, and understanding while also identifying and attending to their emotional needs will help to reduce their dread and anxiety [23]; [24]. This aspect is providing a compassionate and encouraging environment that lessens stress, worry, and terror related to healthcare situations.

Patient engagement in their own treatment is given priority in the widely accepted and respected PCC approach. The benefits of PCC on healthcare outcomes, patient happiness, and overall quality of treatment have been emphasized in several research. According to research, PCC enhances communication and patient participation, which improves treatment adherence and health outcomes [25]. Patients who actively engage in decision-making processes feel more empowered, satisfied, and in control of their healthcare experience [26]. It has been discovered that PCC strengthens the patient-provider bond and increases patients' faith and confidence in medical professionals [27]. This relationship-

centered approach results in a collaborative environment where patients feel valued, listened, and understood. Furthermore, it has been demonstrated that PCC addresses the unique preferences, values, and cultural beliefs of each patient to lower healthcare inequalities and enhance health equity. It acknowledges the significance of adjusting care to suit the particular requirements and conditions of various patient populations [28].

Patient-centeredness, as described in the literature, is a complex concept that involves various elements and perspectives. It encompasses the idea of putting the patient at the forefront of healthcare by considering their unique needs, values, and preferences. Different terms such as client-centered, consumer-centered, user-centered, person-centered, or family-centered are often used interchangeably to refer to this concept [29]. Several factors contribute to patient-centeredness. Individual patient participation is considered crucial, as patients should actively engage in decisions about their care and express their desired outcomes. Effective communication between the patient and caregiver is also essential, emphasizing the importance of patient-centered communication [30]. This includes improving healthcare providers' communication skills, both verbal and non-verbal, to facilitate understanding and shared decision-making.

Creating a caring environment is another crucial aspect of patient-centeredness [31]. It entails promoting a corporate culture that supports and upholds individual choices, supported by the management's attitudes and activities. A PCC climate positively influences healthcare providers' competencies, such as empathy, respect, compassion, and non-judgmental attitudes [32]. Coordination and continuity of care are emphasized as important attributes of patient-centeredness. This requires good interdisciplinary teamwork and seamless transitions between different healthcare providers to ensure a comprehensive and integrated approach to the patient's care.

The attributes of patient-centeredness include a bio psychosocial perspective, which acknowledges the biological, psychological, and social dimensions of patients' experiences [33]. It involves understanding the disease and illness experience and providing holistic care that addresses the full range of problems patients might encounter. Treating the patient as a unique person is another attribute of patient-centeredness [34]. This method entails studying patients' expectations, perceptions, and experiences in order to view healthcare from their perspective. It requires individualizing care to meet each patient's specific needs, values, and beliefs, emphasizing empathy, listening, and treating patients with dignity and respect.

The research emphasizes how crucial it is to have a real and long-lasting patient-caregiver relationship [35]. PCC is based on collaborations that benefit the patient, their family, and the healthcare professional. It involves open communication, the exchange of experiential and clinical knowledge, and is characterized by trust, loyalty, regard, and a shared decision-making process.

2.2 Distress among infertile women

Infertility is a disorder that affects both individuals and society as a whole. The World Health Organization (WHO) defines infertility as a condition of the reproductive system in which a couple is unable to have a child despite actively attempting for 12 months or longer using frequent unprotected sexual encounters [36]. It is a condition that significantly impacts a large number of couples globally.

An important problem that has a considerable impact on the mental health and well-being of infertile women is distress. According to research, women who are infertile are more susceptible than males are to mental problems brought on by the stress of their situation [37]. Women's life are impacted by infertility in many ways, including their emotions, spirituality, sexuality, and physical health [38]. Numerous unfavorable feelings, including low self-esteem, helplessness, guilt, loneliness, and social isolation, may result from it. Stress brought on by infertility is a frequent repercussion that can worsen psychological suffering. The two mental illnesses that affect infertility patients the most frequently are depression and anxiety [39].

The study done by Cui, et al., (2021) indicated that 42.2% of Chinese female infertility patients had anxiety and 27.9% of them had depression. The study also found a link between stress brought on by infertility and despair and anxiety. However, there was a bad correlation between low self-esteem and despair and anxiety. The negative effects of stress connected to infertility on depression and anxiety eventually diminished as self-esteem rose. The study also discovered that the association between stress related to infertility and depression and anxiety was largely mediated by self-esteem.

The distress experienced by infertile women due to the suspension of fertility treatments during the initial phase of the COVID-19 pandemic was analyzed by Haham, et al., (2021). Discovered that the association between stress related to

infertility and depression and anxiety was largely mediated by self-esteem. The study's findings underline that patients' emotional health suffered as a result of the stoppage of reproductive therapy during the early phases of the COVID-19 epidemic. Regardless of the women's background characteristics, the anxiety associated to COVID-19 and the disagreement with treatment suspension were recognized as major variables leading to psychological discomfort among women receiving reproductive therapy. The results emphasize the need of keeping an eye on patients' mental health and offering them psychological assistance in the event that reproductive service is ever shut down or interfered with in the future.

According to a research by Reis et al. (2013), couples starting assisted reproductive technology (ART) therapy for the first time scored more highly on state anxiety tests than couples who had already completed several ART cycles. This implies that the first round of infertility therapy may be more unpleasant and anxiety-provoking. In addition, a different study discovered that the anxiety levels of women who failed to conceive using in vitro fertilization (IVF) operations were greater. This implies that the results of infertility therapies, particularly when unsuccessful, may cause women to experience increased fear. According to a research by Kahyaoglu Sut et al., (2015) [40] 89 women who were undergoing infertility therapy had a worse quality of life and more anxiety. This shows that experiencing infertility therapy itself may have a detrimental effect on a person's psychological health as well as their general quality of life. In addition, a research of the German population found that, in comparison to the general population, both men and women receiving infertility therapy showed greater levels of anxiety. Notably, women in this research had greater degrees of anxiety than males. This shows that both sexes may suffer worry associated to infertility, however women may do so more severely [41].

According to Kiani, et al.'s (2021) [42], infertile women had a higher frequency of depression than the overall population in their individual nations. This suggests that, compared to women in the general population who do not encounter infertility, experiencing infertility might have a major psychological impact on women, resulting in increased rates of depression. Based on these findings, it is necessary to put in place effective plans, policies, and procedures that directly address the detrimental consequences that depression has on the lives of infertile women, particularly in low- and middle-income nations. This may involve improving access to mental health services, providing adequate support systems, and raising awareness about the psychological challenges faced by infertile women.

When evaluating the literature, Lansakara, et al. (2011) [43] conducted the most current research in Sri Lanka to assess distress among infertile women. The findings suggest that lower education, unemployment, older age (over 35), and being married for a longer duration (more than 10 years) are associated with higher levels of psychological distress among infertile women. These socio-demographic factors can play a role in understanding the psychological well-being of infertile women and may help in identifying individuals who are at a higher risk of experiencing mental distress. Further, they argue that the factors such as perceived responsibility for infertility, poor communication about infertility within the couple, a greater need and importance placed on parenthood, concern about the social impact of infertility, lack of social support, and not adopting a child are associated with immense psychological distress in women experiencing infertility. These marital and social factors can play a significant role in understanding and addressing the psychological well-being of women going through infertility, and interventions targeting these factors may help reduce distress and improve mental health outcomes.

These results are consistent with other empirical research emphasizing the value of delivering PCC in healthcare settings, not limited to infertility treatment. It suggests that incorporating patient perspectives on the care they receive can help identify factors that can improve the quality of care delivered. Infertile patients, as other patients, are aware of the demanding aspects of their treatment and can identify dimensions of care that enhance their treatment experience [13]. Based on this finding, following hypotheses were built up;

$H1_a$: There is a relationship between PCC and distress among infertile women

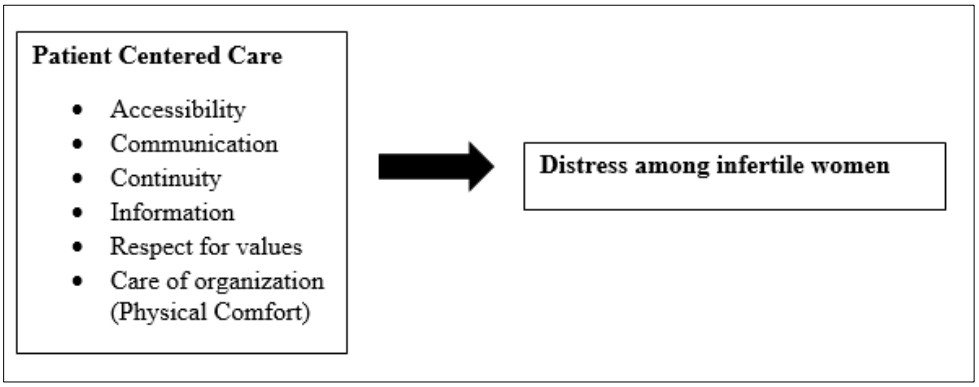
$H1_0$: There is a no relationship between PCC and distress among infertile women

3 Material and Methods

3.1 Conceptual Framework

As identified in literature, there are eight dimensions under PCC. However, the dimensions of family and friends' involvement and Corporation and coordination were not considered in the current study. This research is analyzing the PCC in a government hospital in Sri Lanka. There is less flexibility in making decisions due to the direct government involvement and complicated chains of command in Sri Lankan government health institutes [44]. Further, the Sri

Lankan government hospitals are frequently crowded and have long queues to obtain the services. Hence the hospitals cannot accommodate family and friends of the patients in the hospital [45]; [46]. Therefore, it is not practical to involve family and friends of infertile women in making PCC decisions in the hospital. Moreover, this study was done in a specific hospital which is specialized in mother and baby care. Corporation and coordination refers to integrating different healthcare providers and different venues. However, this study is done in one single unit, infertility care unit, of the hospital which does not involve several venues and healthcare providers since the hospital is limited to providing care for women and babies [47]. Hence, the Corporation and coordination dimension under PCC was not included in the following conceptual framework. Physical comfort was analyzed under care of organization and emotional support was examined under the dimension of respect for values and needs.



Adapted from: [13]

Figure 1 Conceptual Framework

3.2 Population and Sample

The population covered in this study is the infertile women attended to fertility clinic of Castle Street Hospital from December 2021 to March 2022 which consist of 1800 infertile women. 2nd visits, during this period of time, of these women were not considered. The study aimed to assess PCC in a fertility clinic in Sri Lanka. Simple random sampling was used to determine the sample size.

The formula calculates the minimum sample size required based on several factors, including the critical value (1.96) for a specified confidence interval (95%), the anticipated population proportion (P), and the acceptable amount of absolute error (D). In this case, the anticipated population proportion was assumed to be 0.5 (indicating an equal distribution), and the acceptable amount of absolute error was set at 0.05.

$$N = \frac{Z^2 \times P\,(1 - P)}{D^2}$$

N - Minimal sample size
Z - Critical value (1.96) of specified confidence interval which was 95%
P - Anticipated population proportion
D - Acceptable amount of absolute error (0.05)

$$N = \frac{(1.96)^2 \times 0.5\,(1 - 0.5)}{(0.05)^2}$$

$$= 384$$

The required sample size was increased by a predicted 10% non-response rate.

Therefore sample size obtained was = 384 + 38

= 422

3.3 Operationalization

Table 1 Operationalization

Variable	Indicators	Source	Measurement
PCC	Accessibility Communication Continuity Information Respect for values Care of organization (Physical Comfort)	[13].	5 point Likert scale
Distress	Depression Anxiety Hopelessness Tiredness	[39].	5 point Likert scale

3.4 Data Collection

For this research, both primary and secondary data were also utilized. A systematic questionnaire was used to gather primary data. First section of the questionnaire was included with the questions related to the socio-demographic factors of the respondents. Second part of the questionnaire was included questions regarding PCC and distress of infertile women. Secondary data was collected from published journal articles, books and other reliable secondary data sources.

3.5 Analysis

Data analysis was done using SPSS v26. Reliability of the two variables (PCC and distress) was measured through reliability test. The variation of distress level was analyzed based on the socio-demographic factors using Cross tabulation. Finally correlation analysis was done to test the relationship between PCC and distress level of infertile women. When presenting the data related to distress level of infertile women, it was categorized in to High and Low based on the Likert scale. The mean values >3 was considered as lower distress level and ≥ 3 was considered as the higher distress level.

4 Results

29 questionnaire replies from the initial sample size of 422 individuals were not complete. Hence, the dataset was discarded from the incomplete replies since they were judged useless for the study. In order to maintain the integrity and correctness of the data utilized in the study, it was decided to omit these replies. The analysis may concentrate on the complete and trustworthy data gathered from the remaining participants, increasing the validity of the conclusions, by excluding the incomplete replies.

4.1 Socio-Demographic Factors

Table 2 Socio-Demographic Factors

Demographics	Categories	N	Percentage
Age	< 20	1	0.3
	20-25	33	8.4
	26-30	116	29.5
	30-35	140	35.5
	36-40	69	17.6
	41-45	33	8.4

	>45	1	0.3
	Total	Total 393	Total 100
Highest Education Level	Never gone to school	1	0.3
	Up to grade 5	1	0.3
	Grade 5 to 10	15	3.8
	G.C.E O/L	134	34.1
	G.C.E A/L	155	39.4
	Higher education	87	22.1
	Total	Total 393	Total 100
Occupation	Self Employed	29	7.4
	Government Sector	83	21.1
	Private Sector	92	23.4
	Unemployed	189	48.1
	Total	Total 393	Total 100
Income Level (LKR)	< Rs.10, 000	11	2.8
	10, 000-30,000	103	26.2
	30, 000-50,000	179	45.5
	50, 000-100,000	79	20.1
	>100,000	21	5.3
		Total 393	Total 100
Marriage Life (Years)	<2 years	151	38.4
	2-5 Years	129	32.8
	6-9 Years	60	15.3
	≥10 years	53	13.5
		Total 393	Total 100

Table 1 presents the socio demographic factors of age, highest education level, occupation, family income, and marriage life of the respondents. 140 out of 393 (35.5%) were in the age group of 30-35. 34 (8.7%) women were above 40 years. Majority, (39.4%), have completed Advanced Level as their highest educational qualification while 1 person (0.3%) has never gone to school. Most of the respondents, 48.1%, are unemployed. 179 out of 393, 45.5%, respondents were having a family income from LKR 30,000 – 50,000. Majority of the respondents, 38.4%, were married for below 2 years and 15.3% were married for married for 6-9 years.

4.2 Reliability

Table 3 Reliability

Scale	Cronbach's Alpha	N of Items
PCC	0.825	27
Distress	0.809	7

For the PCC and distress scale, the Cronbach's Alpha coefficient is calculated to be 0.825 and 0.809 consecutively according to table 1. This indicates a high level of internal consistency among the items in the scale, suggesting that the items are measuring a similar construct and are reliable for assessing patient centered care and distress.

4.3 Distress level based on socio-demographic factors

Table 4 Distress level and education level of infertile women

		Distress Level				
		Low		**High**		**Total**
		N	**%**	**N**	**%**	
Education Level	Never gone to school	0	0	1	100	1
	Up to grade 5	0	0	1	100	1
	Grade 5 to 10	2	13	13	87	15
	G.C.E O/L	35	26	99	74	134
	G.C.E A/L	45	29	110	71	155
	Higher education	20	23	67	77	87
Total		102		291		393

The table 3 provides an overview of the distress levels among participants based on their education level. One person had a high distress level and none had a low distress level among those who never attended school, only finished up to grade 5, or attended from grades 1 to 5. From the total of 134 participants, 99 (74%) reported high distress levels and 35 (26%) had low distress levels among those who passed the G.C.E. O/L (Ordinary Level) exams. Out of a total of 155 participants, 110 (71%) had high distress levels and 45 (29%) had low distress levels in the G.C.E. A/L (Advanced Level) category. Further, out of a total of 87 participants, 67 (77%) had high distress levels and 20 (23%) had low distress levels among participants with a higher degree of education. The results show that the proportion of people in high distress levels tends to increase as education level decreases, the table reveals.

Table 5 Employment of infertile women and distress level

		Distress				
		Low		**High**		**Total**
		N	**%**	**N**	**%**	
Occupation	Self Employed	8	28	21	72	29
	Government Sector	25	30	58	70	83
	Private Sector	26	28	66	72	92
	Unemployed	43	23	146	77	189
Total		102		291		393

The table 4 presents the distribution of distress levels among participants based on their employment. Among the infertile women work in the private sector, 26 individuals (28%) had low distress levels, and 66 individuals (72%) had high distress levels out of a total of 92 participants. From the unemployed respondents, 43 individuals (23%) had low distress levels, while 146 individuals (77%) had high distress levels out of a total of 189 participants.

Table 6 Age and distress level of infertile women

		Distress				
		Low		**High**		**Total**
		N	**%**	**N**	**%**	
Age	<25	5	22	18	78	23

	26-30	36	28	91	72	127
	31-35	41	29	99	71	140
	36-40	14	20	55	80	69
	> 40	6	18	28	82	34
Total		102		291		393

The table 5 examines the distribution of distress levels among participants based on their age groups. In the age group of 36-40, 14 individuals (20%) had low distress levels, and 55 individuals (80%) had high distress levels out of a total of 69 participants. Among individuals above 40, 6 (18%) had low distress levels, while 28 (82%) had high distress levels out of a total of 34 participants. This table indicates that, higher distress levels observed among individuals in the 35 years of age compared to the other age categories.

Table 7 Family income and distress level of infertile women

		Distress				
		Low		**High**		**Total**
		N	**%**	**N**	**%**	
Family Income (LKR)	<10, 000	3	27	8	73	11
	10, 000-30,000	28	27	75	73	103
	30, 000-50,000	47	26	132	74	179
	50, 000-100,000	20	25	59	75	79
	>100,000	4	19	17	81	21
Total		102		291		393

Table 5 shows that out of a total of 11 participants, 3 (27%) of the families with a monthly income below LKR 10,000 had low distress levels and 8 (73%) had high distress levels. Out of a total of 103 individuals, 28 (27%) had low distress levels and 75 (73%) had high distress levels in the LKR 10,000–30,000 income range. Out of a total of 179 participants, 47 (26%) had low distress levels and 132 (74%) had high distress levels for individuals with an income between LKR 30,000 and 50,000. Out of a total of 79 participants, 20 (25%) had low distress levels and 59 (75%) had high distress levels in the LKR 50,000–100,000 income range. Out of a total of 21 participants, 4 people (19%) from households with an income over LKR 100,000 had low distress levels, whereas 17 people (81%) had high anguish levels. From a total of 291 individuals who experienced increased stress, 215 participants (73%) were infertile women with household incomes of less than LKR 50,000.

Table 8 Duration of married Life and distress level of infertile women

		Distress				
		Low		**High**		**Total**
		N	**%**	**N**	**%**	
Married Life (Years)	<2	12	32	26	68	38
	3-5	52	25	155	75	207
	6-9	24	26	70	74	94
	≥10	14	26	40	74	54
Total		102		291		393

The table presents the analysis of distress levels among participants based on the duration of their married life. From the respondents married for 6-9 years, 24 individuals (26%) had low distress levels, and 70 individuals (74%) had high

distress levels out of a total of 54 participants. Among individuals married for 10 years and above, 14 individuals (26%) had low distress levels, while 40 individuals (74%) had high distress levels out of a total of 291 participants with higher distress level.

4.4 Relationship between PCC and distress level of infertile women

Table 9 Correlation between PCC and distress

Correlations			
		Patient Centered Care	**Distress**
Patient Centered Care	Pearson Correlation	1	0.012
	Sig. (2-tailed)		0.817
	N	393	393
Distress	Pearson Correlation	0.012	1
	Sig. (2-tailed)	0.817	
	N	393	393

Table 4 presents the relationship between PCC and distress level. The correlation coefficient between PCC and Distress is 0.012. This indicates a weak positive correlation between the two variables. However, the correlation is not statistically significant ($p > 0.05$) as indicated by the two-tailed p-value of 0.349. This suggests that there is no significant linear relationship between PCC and Distress.

5 Discussion

The participants' education levels in connection to their degrees of stress (Table 3). Among the participants who were overall highly stressed (N=221), 40% (n=88) had GCE O/L and lower credentials. Conversely, GCE A/L and higher education credentials were held by 60% of the individuals who reported being in extreme distress. Additionally, participants with GCE O/L and below credentials had a larger percentage of severely disturbed participants (100%, 100%, 87%, and 74%) than those with better educational backgrounds. According to these data, there may be a link between lower education levels and greater distress levels, meaning that as education levels decrease distress levels tend to rise.

Additionally, compared to working women, a greater percentage (77%) of infertile women who were unemployed reported experiencing distress (Table 4). 71% (n=73) of the 103 women over the age of 36 who were infertile were extremely distresses, suggesting that older infertile women likely to have higher distress levels (Table 5). In addition, 73% (n=215) of the 293 women whose families earned LKR 50,000 or less showed greater distress levels, demonstrating a link between low income and high distress (Table 6). Furthermore, 74% (n=110) of the 148 infertile women who had been married for more than six years showed signs of higher distress level (Table 7). These results highlight the significant distress levels seen in elder infertile women.

These results are consistent with those of Lansakara et al. (2011), who found that infertile women with lower education levels, longer marital histories, lower income levels, and unemployment experienced higher distress levels. The findings of this study thus further support the link between these characteristics and increased levels of infertility-related distress. When evaluating the relationship between distress among infertile women and the PCC, it was proven that there was no relationship between those two aspects according to the study results. However, Gameiro, et al., 2013 argues that the PCC is significantly associated with the distress level of infertile women which is in contrary to the current study results.

6 Conclusion

In conclusion, the objectives of this study were to examine the relationship between distress levels among infertile women visiting the Castle Street Hospital reproductive clinic and PCC and to analyse the level of distress among infertile women according to their education, employment, family income level, age, and duration of married life. The results of the study suggest a possible link between participants' distress levels and lesser levels of education. Comparing infertile

women with GCE O/L and lower credentials to those with better educational backgrounds, the proportion of severely distressed people was greater. Furthermore, characteristics linked to higher levels of distress among infertile women were unemployment, older age (above 36 years), lower income levels, and longer length of marriage. However, there was no relationship between the distress levels of infertile women visiting Castle Hospital and the PCC. Based on the findings, it can conclude that the PCC strategies used by the Castle Street Hospital have not reduced the distress level of infertile women. However, since there is a higher distress among older infertile women who have lower family income, lower educational background, longer married life and who are unemployed, it can conclude that the distress level arises due to these social factors rather than the PCC in the hospital. Despite having found that the study did not discover an association between distress levels and PCC, it is crucial for the hospital to advance and apply PCC practices. Patient experiences and emotional support can be enhanced by effective communication, empathy, and patient involvement in treatment decisions. The study identifies particular categories of infertile women who report higher levels of suffering, including those with lower levels of education, unemployment, older age, lower family income, and longer marital histories. To meet these populations' particular needs and reduce distress, the hospital should provide customized interventions and support services. This study emphasizes the need of a patient-centered strategy that takes into account unique requirements, circumstances, and emotional well-being in order to improve the quality of care given to infertile w omen.

Compliance with ethical standards

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Disclosure of conflict of interest

The authors of this research publication, titled “Association between Distress of Infertile Women and Patient Centered Care in Fertility Clinic at Castle Street Hospital Sri Lanka”, declare that there is no possibility of potential conflict of interest with the work presented in this research paper. All the contribution made by the authors for this research has been made in an impartial and objective manner without any personal or financial association which can compromise the objectivity and integrity of the outcomes of the research.

Statement of informed consent

Prior to their involvement in the study, all participants gave their informed permission. They were informed of the goals, methods, and possibility of data usage for research of the study. Participants received guarantees that the information they provided would be used only for this research and that their names would remain private. They were made aware of their freedom to withdraw their data at any moment and without consequences.

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	**Dr. Wasana Sandeepani Kalansooriya** is a highly experienced medical professional with a background in Obstetrics and Gynecology. She obtained her MBBS degree from University of Science and Technology in Chittagong, Bangladesh. Her journey as a medical officer commenced with her internship at the Gynecology and Obstetrics department, Teaching Hospital Mahamodara, Galle, where she honed her skills and gained valuable experience in managing a diverse range of obstetric and gynecological cases. Currently, she serves as a Medical Officer in the Fertility and Family Planning units at Castle Street Hospital for Women, Sri Lanka. Her experience in Subfertility Medicine allows her to support and guide couples facing difficulties in conceiving, providing them with comprehensive fertility treatments and counseling.