ONLINE SOCIAL INTERACTION COMMUNITY MODEL FOR UNMET NEEDS OF OLDER PEOPLE

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ABSTRACT

Modern medicine and technology have enhanced the average life expectancy of a person, but this has not improved the quality of life for those who are getting older. Elderly persons struggle to take care of their fundamental requirements, and family members are unable to give them the attention they require. An online community based new method of communication and interaction for the elderly could be a solution to address the situation, however, there are difficulties observed with the elderly persons throughout the design stage. In order to address the unmet everyday needs of older adults, this study investigated the design methodology and design process for an online social interaction community (OnSocialCom). A conceptual model was proposed specifically for senior people who live alone and was based on social connectedness, social support models, structural Camberwell evaluation of need for the elderly theories, and 4W (What-Where-When-Who) models. Its application in the actual setting was investigated through empirical investigations involving users and experts. The developed model contains five modules; online social interaction, profile management, unmet needs interaction, unmet needs plan, and recommendation. Additionally, evaluation was performed during the design process by experts for review analysis to clarify the needs of the users and assist in optimising the functionality of the conceptual model.

Keywords: *Elderly People, Social Interaction, Unmet Needs, Users, Social Connectedness, Recommendation.*

1. INTRODUCTION

The elderly population is rising significantly. The total number of people in the globe who were 60 or older was 962 million. By 2050, there will be more senior people than ever before, with an estimated 2 billion of them [1]. Elderly people are extremely sensitive and they yearn for companionship, meaningful connections and independent life as they age. However, after they reach their retirement age, elderly people are more prone to physical and psychological declination, which makes them more reliant on others [1]. Chronic illnesses and functional limitations have a higher incidence rate as people age, but today's elderly individuals have more robust functioning capacities [2]. Social isolation is a problem that makes it difficult for older people to live in a house. The majority of older people experience a loss in their ability to carry out daily tasks and need more experience utilizing computers and social media [3]. The statistics from the US show that 43% of Americans in their 60s and older report feeling lonely, and 44% of women age 75 and older live alone [4]. The Japanese word Kodokushi (孤独死), which is referred to as "Dying lonely" is a growing problem among the elderly in Japan due to the increasing number of unaccompanied and undetected deaths. With 32,000 deaths every year, the frequency of unaccompanied and undiscovered deaths in Japan has increased.

Apart from these, the notifications feature to the elderly's family is necessary to remind community members about elderly care duties, such as elderly medication, doctor's appointment, and house cleaning. Such features are missing from the

majority of the existing social community models and this opens a critical limitation aspect in elderly-based platform interaction model. Social community platforms designed specifically to the elderly's needs and requirements are thus important for better navigation through them and for keeping the elderly's family members informed. Moreover, previous researches have proven that social community is useful for both online and offline interaction; where elderly people have a socially active life by meeting up with different people with similar hobbies and interest in their region [5][6]. Unfortunately, the developments are not popular as the current social community platforms still focus on online improving social interaction but no community was designed for the older people to interact their unmet needs remotely. Thus, there is a need for a social interaction community model that can help to overcome this issue and help elderly people to remotely interact their unmet daily needs with their friends and family, or people with similar interest within their locality to fulfil them in offline mode. Therefore, this research proposes an online social interaction model designed especially for the elderly by investigating the elder's needs by observing them and understanding them.

The aim of this research is to develop online social interaction community model for older people to interact remotely their unmet needs. The proposed conceptual interaction community model will be developed based on the literature review and the user-defined feedback (user-friendliness of elderly people) which will be conducted through a pilot study. Data collection methods such as questionnaire, interview and observation will be used for identifying user requirements. This study provides a technique to design a social interaction model from scratch which can be used as guidelines to apply in any other related field. This is in line with some of the identified existing social community platforms such as

[7][8][9][10][11][12] which were not user-friendly for the elderly people as they were not specifically designed for the elderly, thus making it necessary to identify the elderly's requirement for developing the conceptual social community.

This research focuses on the development of an online social interaction community model tailored to meet the unmet needs of older people. The importance of this endeavor lies in its potential to revolutionize the way society supports and engages with this aging demographic. By harnessing the power of technology and creating a virtual space where older individuals can connect, socialize, and access vital resources, we aim to address the

multifaceted needs of this population and enhance their overall quality of life.

The key contributions of this research in four concise points:

- ✓ Social Well-being: The online community model enhances the social well-being of older individuals by addressing social isolation and loneliness, providing a platform for meaningful connections and emotional support.

- ✓ Digital Inclusivity: It promotes digital inclusivity by creating an accessible online environment, bridging the digital divide, and ensuring that older adults with varying levels of technology proficiency can participate effectively.

- ✓ Access to Services: The model facilitates easy access to vital services such as healthcare information, transportation options, and social support resources, streamlining the process of obtaining essential services for older people.

- ✓ Intergenerational Engagement: By encouraging intergenerational interaction, the research leverages the knowledge and experiences of older adults and fosters mutual learning, benefiting both older and younger generations while breaking down age-related stereotypes.

2. RELATED WORKS

Among the most significant demographic patterns of the twenty-first century was population aging. As the number of elderly people compared to younger generations rises, this seems to be a global phenomenon. Online communities have been typically web-based platforms that serve as a gathering place for individuals with similar interests, concerns, hobbies, and passions. Due to its capacity to maintain connections with dear ones particularly as they get older, the social community nowadays is also becoming more popular with the elderly population [5]. Researchers do gain some insight into the emphasis areas of the social community oriented towards the elderly by reviewing the existing published papers for the elderly.

By combining qualitative and quantitative methodologies, researched and created an online community to improve the quality of life for the aged in the urban population [12]. The research's goals are: 1) to examine the issues and demands of urban seniors 2) to research and create an online network to enhance senior citizens' quality of life in cities 3) to create a model for an online community aimed at improving the quality-of-life for urban seniors.

Questionnaires have been the instruments utilized in this study to gather quantitative data, whereas interviews, group discussions, class summaries, and participant observations have been used to gather qualitative data. The satisfaction and performance of the senior school teachers, doctors, local elderly, and senior welfare officials in promoting the elderly's quality of life in urban society has reached a significant level. Furthermore, this model does not include an elderly tracking mechanism.

A computer-based intermediate system called Social Connector has been developed to enhance older individuals' moods and assist them in overcoming social isolation's detrimental consequences [8]. The social connection between an elderly person and his or her close relations, such as grown children and grandkids, can be improved by this approach. The technology can potentially be employed as a mood and social interaction detector for senior citizens. The technology is highly received by older folks, according to the preliminary assessment outcomes, and it could be employed to improve social connections with their family. However, this system is only applicable for monitoring the elderly's mood.

[13] carried out a study to examine the requirements of community-dwelling fragile older individuals with reference to an online system. Following the modification of an existing system in response to these requirements, an online community care platform (OCC platform) with care, wellness, and interaction features was created. This platform has been created to assist fragile older persons in maintaining their functioning and independence by encouraging self-care and offering trustworthy information, goods, and services. A user-centered design was adopted for the study. Ultimately, it was anticipated that an OCC platform may help frail older individuals participate in society, develop their self-management skills, and strengthen their sense of belonging. However, the online platform impact is not analyzed.

Existing strategies for reducing senior social isolation and enhancing their mental health rely on using online platforms like social networks or service networks. These approaches fall short on two points, though: older individuals don't see the requirements or advantages of utilizing them, as well as they struggle to recognize elderly individuals as active participants. A solution is offered to deal with these two problems, and it involves involving people actively and cooperatively as providers of activities and/or recipients of social advantages through aiding platforms that combine a service system with a social system [14]. With this concept, seniors have many options to not only apply their talents and experiences to interchange advantages with some other participants but also to deepen their social connections. It integrates the merits of both systems. The suggested approach can be utilized as a way to involve senior citizens in the community, encourage more physical and mental activity, and thereby lower the expense of health care to society. Furthermore, the platform's privacy, trust, and security are not analyzed.

Instead of medical professionals, a sizable portion of elder care is given by unofficial carer takers, like family members. Thus, it is crucial to assist casual caregivers in a way that increases their effectiveness and lessens the stress of ongoing caregiving. Therefore, a model of an online assistance system for unofficial elder care providers is shown [15]. The prototype features several modules that offer services like managing patient and caregiver profiles, planning and recommending care, alerting patients to treatments, maintaining an information archive, and fostering social interaction between caretakers. Caregivers can view this web-based model using a smartphone or computer. Over 70% of individuals are satisfied, according to the prototype's review. However, due to complexity, the system has higher drop-out rates.

3. THE ONSOCIALCOM MODEL FOR UNMET NEEDS OF OLDER PEOPLE

This section provides a detailed explanation regarding the integration of the proposed OnSocialCom model and the scope of the proposed model and emphasizes contributing elements essential in improving older people's life satisfaction by interacting with their unmet needs through social networks and specifies the critical features. It also discusses the functionalities of the features included in the proposed OnSocialCom model and details how the model features are developed from the social network sites (SNS) model prototype.

3.1. The Integration of the Proposed Model

The OnSocialCom model integrates several theories and models to enable a sustainable solution to help older people fulfill their daily unmet needs. These models and theories were identified based on the literature review and user requirements as described in [16]. The OnSocialCom prototype which is described in [17] was designed based on this model. However, the proposed model emphasizes contributing elements essential to improving older people's life satisfaction by interacting with their unmet needs through social networks and specifies the critical features. Table 1 describes how the identified models are integrated into the OnSocialCom model. The five theories or /and models which were included are The social

Table 1: The Identified Models Are Integrated into The OnSocialCom Model and Prototype

Theories/Models	Features into OnSocialCom
The social connectedness and social support model by [16]	Social Connectedness, Social Support, and Self-reported Health
the social connectedness and social support model by [20]	Social Connectedness, Social Support, Use of SNS, and Satisfaction with Life
Camberwell's assessment of the need for the elderly by [21]	identification of the unmet needs of older people through (CANSAS)
The 4W model by [7] [3][23]	Where concept (location context) Who concept (Identity context) What concept (Activity context) When concept (Time context)
The rule-based reasoning (RBR) model by [17]	Representation, Retrieval Facts, and Matching Rules

connectedness and social support models, assessment of the need for the elderly, The 4W model by [18], [19] and The rule-based reasoning (RBR).

3.2. The Proposed Model Scope

The proposed model consists of three parts: (1) Social connectedness and social support factors, (2) Overall satisfaction (Self-reported unmet needs), (3) Technology features (use of online social networking that can enhance feelings of connectedness and support among the elderly), and it is depicted in Figure 1. The following subsections describe the model's parts in more detail.
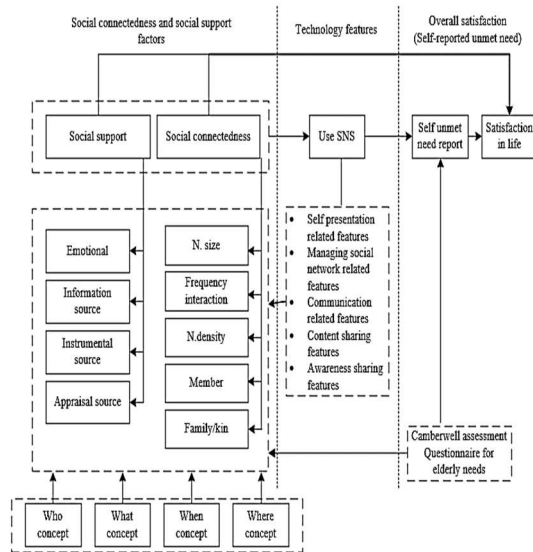

Figure 1: The OnSocialCom Proposed Model

3.2.1. Social Connectedness and Social Support Factors:

Social connectedness has been characterised by the size of the social network, frequency of contact with members of the network, network density, closeness to members, and percentage of network members who are family or kin [20][22]. At the same time, social support comprises emotional, instrumental, informational and appraisal support [20]. If the online social group members are a part of cater to the aforementioned qualities, older individuals will sense high social connectivity and high social support. As a result, the variables could be employed to evaluate perceived social support and connection, which could be utilised as predictors for overall satisfaction with life. These factors are further supported by integrated theories and models.

3.2.2. Overall Satisfaction (Self-Reported Unmet Needs)

The overall satisfaction factor mainly concentrates on fulfilling the self-reported unmet needs of the elderly people. The Camberwell Assessment of Need Short Appraisal Schedule (CANSAS) was used to measure the elderly participants' overall satisfaction status based on identifying their unmet daily needs. This measurement scale consists of 22 subscales.

3.2.3. Technology Features

The proposal model components were modeled based on two procedures like the existing models' features and user requirements. These two procedures are used as a basis to form the components of the OnSocialCom model. The process of formulating the proposed OnSocialCom features by considering the user requirements and existing social communities is discussed. The different features provided by existing SNS are incorporated into the model as functions to be included in the OnSocialCom model. The features gathered from the existing models are described here. The Online Social Community for interacting elderly's unmet needs component include technology features like self-presentation features, which includes creation of social network, forming groups, inviting friends, promoting communication among the elderly, interactive communication through the channel, and profile management as it was explained in Section 3.3.1. Similarly, the Unmet needs interaction component is combined technology features such as communication related features which includes chatting, sharing messages, commenting, automatic interaction through messages as was described in Section 3.3.2. The track component includes technology features like tracking the elderly's state, and the Profile

management components include technology features like content sharing, posting and commenting on a family message board, uploading photos and videos links to other information, updating emotional or situational states such as location information, activity information, likes and dislikes, as well as monitoring of the elderly's state. And, the Daily need plan components include technology features like assigning tasks or appointments, personalized email service with caring plans. Likewise, an automatic recommendation component includes technology features such as sharing location coordinates, matching activities, courses or services, automatic monitoring of the elderly's state interaction message as well as event recommendations.

3.3. The OnSocialCom Model Components

The OnSocialCom model components were build based on the features selected form the existing model components like SNS that matches with the features selected for the proposed model. The features of the OnSocialCom model for older people consist of six essential features that satisfy the older people's requirements and fill the existing platforms' gaps. The six essential features of the proposed model are online social interaction, unmet interaction needs, profile management, unmet needs plan, recommendation and Notification.

3.3.1. Online social interaction component

A social network that offers a way to interact with the unmet needs of the elderly is the online social interaction component. The 4W model complies with these demands to meet unmet daily needs. The 4w model's integration with the proposed features is discussed in [24]. There are several ready-to-use social networks available, but many of them are not made to meet the needs of older people who want to engage with others. As a result, the OnSocialCom model's social interaction community feature offers older people a private group (closed group) online space where they can interact with their own community while maintaining the anonymity of sensitive information. In particular, the community component for social interaction offers elders a free online space to deal with their unmet daily requirements. This feature also permits the addition of new members, including friends, family, healthcare professionals, domestic helpers, and volunteers with specialised skills. Additionally, it has an SNS component that enables the elderly to submit requests and the group members provide help. Community groups, communication channels, interacting with unmet needs, and member's community are the four functions that make up the social interaction community feature.

3.3.2. Unmet Needs Interaction component

This component examines and manages the everyday requirements of the aged for the social community group members and offers a reliable and acceptable facility to the elderly, particularly in emergencies. Additionally, it maintains track of the presence of members of social community groups who are actively participating as well as recent requests and the elderly condition. It promotes responding to the needs of the elderly at any time or at any place. Additionally, it gives senior citizens the opportunity to rate and comment on other community members in order to meet their unmet daily needs. Figure 2 provides a description of the unmet needs interaction component's structure. The user requirements for the unmet needs interaction feature include needs management, which includes tracking the unmet needs of the elderly people in the community and sharing them with other community members at any time or place. The unmet needs interaction part includes the member community groups, Tracking, and interacting unmet needs.
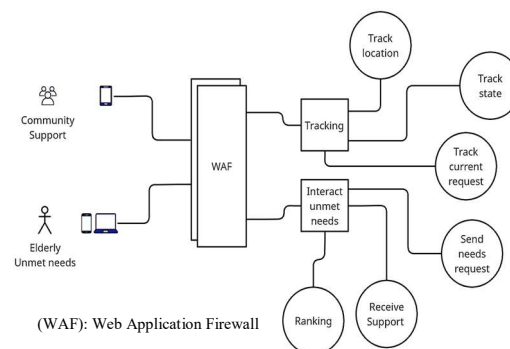

(WAF): Web Application Firewall

Figure 2: The structure of unmet needs interaction

3.3.3. Profile Management component

The three sub-features that make up the profile management feature are account creation and management, user profiles, and unmet requirements recording administration. The first sub-feature is for user verification, while the second asks the elderly to provide profiles of themselves and other community members, including personal information, illnesses they have had, and the active members' contact information. By using geriatric evaluations like the CANSAS assessment, users of the unmet needs administration sub-feature can keep track of elderly people's household tasks or medical care. The elderly profile is controlled and kept up to date by using the CANSAS evaluation to identify the elderly's unmet needs. The specifications for the profile management feature define the qualities of the active members of the elderly's profiles, the requirements for the daily plans and recommendations for activities, and the crucial security aspects for user identification.

3.3.4. Unmet needs plan component

According to Figure 3, which depicts the schematic of the unmet needs plan component, the unmet needs plan feature creates a timetable based on the older people's profile and members' recommendations to meet the elderly's unmet daily needs. Automatic plans are mostly produced using rule-based reasoning (RBR). Based on the individual characteristics, eight reference rules are developed. This function automatically engages social group participants in the daily unmet need plan throughout various time slots. The community members of the group are helped by this feature to manage the responsibilities of the elderly service successfully. It keeps track of activities that are performed at home, such as mealtimes, personal care, and housekeeping duties, as well as health status information like
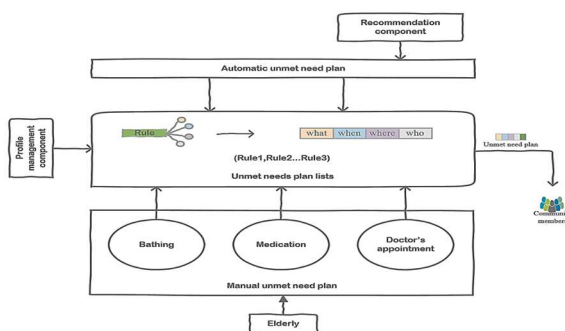

Figure 3: The unmet needs plan feature structure

doctor's visits, prescription schedules, and older adults' daily regular tasks. On the basis of the elderly's daily unmet requirements plan, it also receives updates in the timetable. Additionally, a list of unfulfilled needs was created based on pertinent data from user profiles and computerized recommendations. Interacting with automated unmet daily need lists is one of the unmet needs plan's prerequisites as shown in Figure 3.

3.3.5. Recommendation Features component

The automatic recommendations generated by the group community members are the goal of the recommendation function. The updated CANSAS evaluation for older persons is applied as data facts, and then these facts are analysed and compared with knowledge rules to generate the suggestions on the unmet need list. The recommendations are generated automatically using the RBR algorithm developed by [24]. The RBR is a common set of rules that identifies a decision-making process and a chaining procedure. The RBR technique, which consists of two primary phases, namely the representation and the comparison (the processing cycle has retrieval facts, matching rules, and revision), is a function of the recommendation component. Based on the

CANSAS assessment for older persons, this feature's recommendations are broken down into four categories: physical treatment, exercise, food, and emotional management.

3.3.6. Notification Features component

To remind older individuals and the members of their community group of important daily unmet needs and upcoming tasks, this component sends notifications, reminder messages, recommendations, unmet needs, and plans. The unmet needs plan and recommendation features are loaded into these notification features, which provide a concise presentation of the general list of unmet needs, which is then distributed as alerts or reminder messages. These notifications, in particular, serve to remind community members of unmet health needs, prescription due dates, doctor's appointments, and elderly daily routine duties like housecleaning and shopping, and they also serve to assess the elders' capacity to fulfil these tasks.

4. THE MODEL DEMONSTRATION

To support the suggested model, this study performed qualitative studies. The Expert Review technique was used. Two formats were used for the expert review mechanism: surveys and questionnaires. Assistant professor, senior software engineer, and two researchers made up the group of chosen experts. Based on the suggested model, a questionnaire comprising five features was created and verified in advance. The questions have been created with the express purpose of gathering the level of agreement or disagreement with assertions regarding the suggested framework. Additionally, a questionnaire session with four experts was conducted to gain additional perspective on the viability of the suggested framework. The workflow and method of expert review analysis is shown in Figure 4. Moreover, to demonstrate the model and assess the extent of accessibility of the functionality of the initial model; the high level of online social interaction community model is developed. This study has two study rounds. Firstly, an initial model is built based on the conceptual model and evaluated
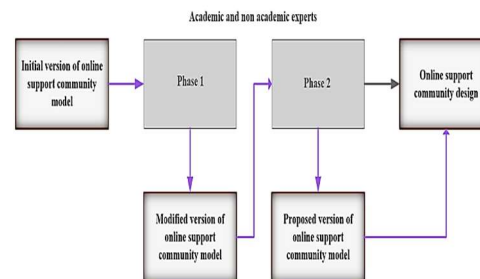

Figure 4: Expert review analysis workflow and method

in order to get some advice from expert review analysis's instructions. Secondly, redesigning of the initial model to produce an online social interaction community model, then evaluated again by user task analysis. An expert review analysis of the initial social community model is carried out to understand the user's accessibility and proposed model's functionality.

4.1. Demographics information of participants

Academic and some researchers in the field area of social media and networking were approached to participate in this study, and 4 experts responded positively and accepted to take part in the study. Table 2 indicates the expert's demographic information who participated in this study.

Table 2: Demographic information of the experts

Participant	Occupation	Research interest	Experience
Expert 1	Assistant professor	HCI	18 years
Expert 2	software engineer	IT	15 years
Expert 3	lecturer	Networking	09 years
Expert 4	Researcher	Web designer	10 years

4.1.1. The structure of conceptual model

In this phase, all features are essential values, and their descriptions are comprehensible (part B), as shown in Figure 5. Even though there are conflicting opinions among experts about the details in the feature descriptions. This implies that for some experts, the features descriptions are sufficiently detailed, while for others, additional details are required.
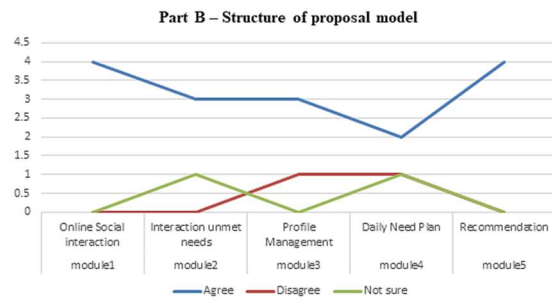

Figure 5: The responses frequency for features

The result from Figure 5 indicates that most of the experts agreed with the features of the proposed model structure, and none of the experts disagreed with the social interaction community and interaction unmet needs features. However, four features with one expert response of disagreeing or not sure.

4.1.2. The structure of proposal features

The frequency of responses for features' position in distinct stages from questions in structure of features (Part C) is shown in Figure. 6. Experts' opinions show that the patterns of all features in the recommended model's structure are logical and easily understandable. Also, there is a similarity between feature description and their position inside the features in the conceptual model. Even though,
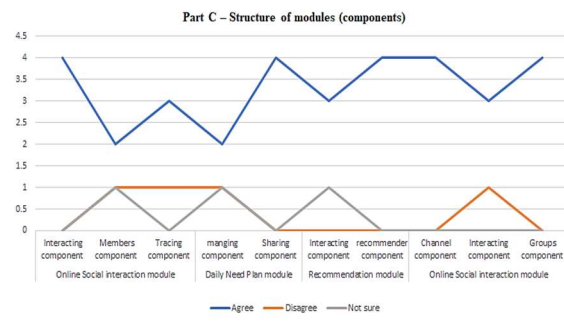

Figure 6: The responses frequency for features

there are differing opinions among experts regarding the details of the features' placement.

Figure. 6 also shows that six features have the expert response of not being sure or disagreeing with their features structure. In contrast, at least 50% of the experts agree with all the features' configurations

4.2. Relations between the proposal features

The frequency of responses for relationships among the features from Q9 (Are the following relations between components (connected to each other through an arrow) logical?) of relation between features (Part D) is shown in Figure 7. The expert opinion shows that most of the relationships are correct; the relationships: 1) profile management feature (PM) >> social interaction community feature (OSI), and 2) Recommendation feature (REC) << profile management feature (PM) have attained diverse opinions from the experts.
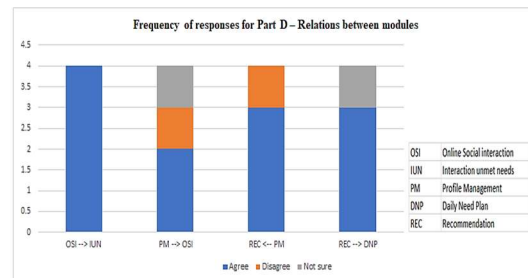

Figure 7: The responses frequency for

From the Figure 7, most of the experts agreed with the OSI→IUN relationship, 50% of experts agreed with PM→OSI relationship and 75% of the

experts with REC←PM and REC→DNP relations. Only 25% of the experts have disagreement and are unsure in the PM→OSI & REC←PM relationships and PM→OSI & REC→DNP relationships respectively. Altogether, it is found that PM→OSI have mixed opinion by the experts.

4.3. Illustrative responses from the experts

An overall of 15 illustrative responses was gathered from the experts' feedback. Figure 8 indicates the categories of responses such as agreement, disagreement, concern and suggestion.
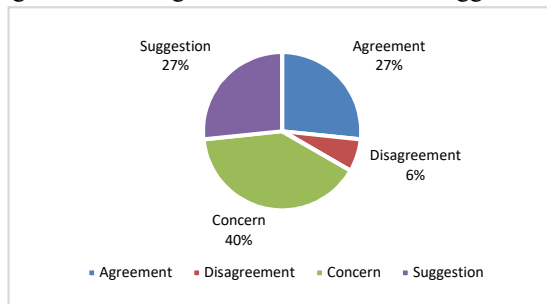

Figure 8: The responses from the experts for four

According to the figure 8, the cumulative descriptive responses approximate a 27% agreement rate. These replies are connected to the significance and use of features, the relation among the 6% of responses suggests that the experts disagree about the information in the question. The main points of disagreement include information in the elaboration of feature description, request for emergency assistance, lack of performance appraisal methods, absence of video-based interaction.

Furthermore, experts' concerns account for 40% of the replies with part of these concerns referencing the fact that some features require extra details in the descriptions to make it easier to read, absorb, and implement. Likewise, 27% of the comments are in the form of expert suggestions. This includes renaming the social interaction feature into the social interaction community, moving the Members community group in the Unmet needs interaction feature and the Members community in the Social interaction community feature to the Profile Management feature.

4.4. Changes in the features of the conceptual model

The analysis from the quantitative and qualitative responses revealed three types of changes that need to be incorporated in the model's features to produce the prototype. These changes are about: details of the feature, a new feature to be added, and relationships between features. The experts' instructions that regarding to details of the features is determined as following:

✓ More elaboration of each feature description has been added in the description of features.
✓ Requesting emergency assistance has been added as function 'emergency assistance' into the structure of Unmet Needs Interaction feature.
✓ Redirection of sending unmet need requests (replay and forward) have been added into the structure of needs interacting in Unmet Needs Interaction feature.
✓ The name of feature 'need plans' is renamed to 'unmet needs plans and the name of 'Update and create plan' is renamed to 'Generating needs plan'
✓ The feature 'social interaction' is renamed to 'social interaction community'
✓ Performance appraisal method of community members by rating elderly's fulfilled needs have been added into Unmet Needs Interaction feature.
✓ Moving two structures 'Members community group' in the feature 'Unmet needs Interaction' and the 'Members community' in the feature 'Social interaction community' to the 'Profile Management feature'.
✓ Support elderly by using video communication have been added into the structure of the feature 'Communicate in groups' in social interaction community

A new feature 'Notification' is added to the proposal model structure. This feature has been established to connect the elderly's recommendations and daily plans to community members. In case of relationships between features, two new relationships have been added to relations between features prototype due to adding notification features. The description of these relationships is given in Table 4.

Table 4: Description of relationship among the features

Relations between features	
1	notifications ← unmet need interaction
2	daily need plan → notifications

5. DISCUSSION

The experts' review of the presented framework shows that it is workable. The social connectivity and social support frameworks were significantly included into the conceptual model's construction. The 4W (Who, What, Where, When) model and the structural Camberwell evaluation of necessity for the elderly theory have also been added to support the

various parts of the integrated models. According to the conceptual model, which is predicated on combination concepts, perceived social connectedness and social support both were positively correlated with elderly people's overall life gratification, and both were also positively correlated with their online social networking sites usage. The different features provided by online social community are incorporated into the model as functions to be included in the OnSocialCom prototype. Initially, a review of functionalities in existing social community platforms was carried out, followed by specifying the user requirements. The Camberwell Assessment of Need Short Appraisal Schedule (CANSAS) was used to measure the older adult participants' overall satisfaction status based on the identification of their unmet daily needs.

The features of an online social community model for older adults consist of five essential features, which satisfy the older adults' requirements and fill the gap in the existing platforms. The five essential features of the proposed prototype are online social interaction, profile management, unmet needs plan, interaction unmet needs, and recommendation. These are the module features to function the OnSocialCom framework. Online social interaction feature is essentially a social network that provides social interaction and offers a way to interact the elderly's unmet need requests. The 4W model supports these requests to satisfy unmet daily needs. However, there are many ready-to-use social networks, but many of these networks are not designed for older adults nor to interact their unmet needs [7] [8] [9] [10] [11][12]. As a result, the social interaction community feature of the proposed model provides a social community private group (closed group) online area for older adults. The evaluation confirms that the suggested framework aids in identifying the daily needs of older individuals that are unfulfilled. The experts generally have positive remarks to make about the framework. They all recognise the potential of using this framework as the cornerstone for developing ONLINE social interaction community model for elderly people's solutions that place a strong emphasis on ongoing use.

6. CONCLUSION

This research develops and presents the conceptual model of the OnSocialCom for older adults. The proposed OnSocialCom model is designed based on the limitations of existing solutions of online social community platforms. The model has been designed based on an initial social community model by matching users' requirements and the existing social community features with the structure of the theoretical model.

Subsequently, a group of experts have confirmed and validated the model through expert review analysis. Based on three theories, the conceptual model has been developed which include social connectivity and social support frameworks, 4W (Who, What, Where, When) model and the structural Camberwell evaluation. These theories are relevant to elderly people population. Moreover, the model consists of five modules, namely online social interaction, unmet needs interaction, profile management, unmet needs plan, and recommendation.

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