Scholastic Medical Sciences

Case Study

Volume 3 Issue 6 June 2026

Case Study: A Child with Burn Injury

Ahmed Almoosa

Rehabilitation Department, Ministry of National Guard-Health Affairs, Saudi Arabia

Corresponding Author: Ahmed Almoosa, Rehabilitation Department, Ministry of National Guard-Health Affairs, Saudi Arabia

Received: May 12, 2026**; Published:** May 28, 2026

Case Study

Reem is a pseudonym that is chosen for this client.

Client information

According to the father, Reem is "the spirit of the house" as she is a smart and adorable child. She has strong bonds with her father and siblings, especially the 21-year-old brother "Salem". Riding bikes and drawing are her hobbies. At her age, she is ready to enter kindergarten and is extremely excited about it. Reem has the fear of health care professionals and does not want to talk to them, therefore, hospital settings are not comfortable environments to her.

Diagnosis

Reem is a 5 year-old- girl who sustained a severe burn injury as a result of house fire affecting 25% to 30% of total body service area (TBSA) including face, upper back, arms and hands. The burn on the dorsum of both hands is the worst as it is classified as third degree burn. Reem has no other medical complications.

Family

Reem comes from a relatively large family consisting of Reem, parents and five siblings. Reem is the second youngest child. Additionally, as part of the culture, the family has strong bonds with relatives and many social relationships. The family also has a maid.

As a result of the same incident, mother died; and a brother who saved Reem is severely injured having inhalation problems due to smoke and scattered first to second degree burns. All of what is happening to the family is a tragedy affecting, not only the family, but also others who are close to the family.

Referral

After long hospitalization and acute stage, Reem is referred to the occupational therapy service to see her as outpatient for scar management. Scars are growing; and elbows and hand joints are becoming stiffer forming contractures

Application of Theoretical Models

In this paper, three different theoretical models: Occupational Adaptation (4, 6), Ecology of Human Performance (1, 2), and Lifestyle Performance Model (3) are applied to the case study.

Occupational Adaptation

Assessment. Reem's burn injury affects two of her systems, i.e., sensorimotor and psychosocial systems. No cognitive impairments exist. Sensorimotor limitations present due to limited range of motion of hands and elbows, pain, and hypersensitivity. Loss of mother, fear of being in a hospital, and appearance of scar on face and hands affect Reem's psychosocial system. Since Reem is a child, the main concern is play. In addition to the fact that Reem wants to engage in play (desired for mastery), the family expect Reem to be able to play (demand for mastery). Another concern of the family is the ability of Reem to interact with other children because face scar may hinder her social interaction, particularly she will go to school soon. Thus her role as a student might be interrupted. Reem's relative mastery is definitely limited by the burn injury. Assessing the relative mastery will be though observation carried out by therapist and family.

Intervention. The treatment will focus on play and social interaction. The occupational readiness of the intervention will address range of motion, pain, dexterity, and scar management, which are relevant to play. Also, the therapist will reduce the social interaction barriers due to face scar by managing the scar and providing Reem with colored face masks and gloves (pressure garments) as part of scar management so that she and other children will not feel that these garments are for treatment. The therapist's goal is to facilitate Reem's interaction with others (occupational environments). Moreover, a home program will be provided to the family in order to help Reem with play and social interaction.

The most important part of the intervention is occupational activities that translate what Reem has learned in occupational readiness into meaningful actions. In the clinic, Reem can initially participate in play activities, that she likes, with the therapist and family members. Regarding social interaction, Reem is first going to meet another client

in the clinic playing and chatting, with the presence of the therapist as a facilitator. After she reached relative mastery in play and interaction, then she may play in a real-life environment such as the hospital play room where she will play with other children, which will increase the demand for occupational adaptation. At the same time, as Reem is playing with other children, she is interacting with them in an appropriate environment. The above are some examples. In general, intervention depends on the client, family, therapist, available resources, and so on, but the focus must be on the goals of Reem and family, that is, play and social interaction.

Throughout assessment and intervention, the therapist evaluates Reem's occupational adaptation process through documenting her energy level, adaptive response modes and behaviors, and relative mastery. Occupational adaptation is an internal phenomenon (4) that is difficult to measure. However, when Reem's modes and behaviors change in order to deal with occupational activities, and when she applies what she has learned during play and interaction in clinic to other occupational activities, then occupational adaptation process changes. Therefore, the family play a key role in observing occupational adaptation. The overall focus of the intervention is to help Reem to reach relative mastery in play and interaction with others. Thus to measure relative mastery, the therapist and family will evaluate if Reem's occupational activities are effective and efficient and if she is satisfied, for example, by asking her if she is happy.

Ecology of Human Performance

Assessment: As mentioned earlier, Reem and family's wants and needs are that Reem is able to play and interact with other children. However, due to the injury, Reem is limited to use her hands and elbows effectively, and the scar appearance and pressure garments may become barriers to her play and interaction with children. Thus, Reem is experiencing sensorimotor and psychosocial difficulty in performing tasks.

It is important to conduct contextual assessment that may illustrate some potentially relevant factors to be considered in planning Reem's intervention. The following are some examples of Reem's contexts that have been collected:

Physical:

- Reem lives in a large house
- She is going to school very soon.

Social:

- Reem has five siblings, Two are close to her age. One brother is admitted in the hospital as a result of the same incident.
- Reem's mother died in the same incident.
- Family has a maid.
- Family has strong bonds with relatives.

Cultural:

- Reem can visit relatives and spend some days in their houses with their children.

Intervention: Play and interaction with children can be integrated in one task through playing with them. As Reem exhibits deficits in her sensorimotor and psychosocial skills and abilities (person variables) her performance is limited. Therefore, the therapist should work on increasing range of motion and managing scarring (restore), in order to help Reem engage in playing with children effectively. Family will be given a home exercise program and scar management instructions to be carried out on a daily basis. Because the mother who used to take care of Reem has passed away, her context is now limited. However, the family members and maid can provide the care Reem needs at home (adapt/ modify the context).

Contrived context may either facilitate or inhibit performance (2). During a task, Reem may start playing with one or two similar clients in the clinic (contrived environment). When her skills and abilities improve, then intervention may take place in the hospital play room (more natural environment), which may show her true performance. Reem's cultural and social contexts are extremely supportive if they are well utilized by the family. The therapist needs to encourage family to give Reem more attention and time and invite relatives' children to spent time and play with Reem. Another important aspect is that the task must be interesting and meaningful to Reem, and it should be appropriate to her age, skills, and abilities. Reem can be accompanied by one or two siblings or relatives she loves, particularly in the clinic, in order to make her feel comfortable (prevent strategy).

Lifestyle Performance Model

Assessment: Since the family's goal is that Reem is able to play and interact with other children, the focus of the assessment will be on only two domains: intrinsic gratification and interpersonal relatedness. The occupational therapist uses the Lifestyle Performance Profile in order to evaluate Reem's skill strengths and limitations relevant to these two domains. Certainly, Reem exhibits some limitations, as mentioned earlier, that may interfere with her lifestyle and quality of life. If these deficits are not addressed by the therapist, then Reem will not be able to achieve the family's goals. Environment around Reem should also be explored because it can maximize her performance. Reem has supportive environment that needs to be infused in the intervention plan.

Intervention: As stated in the previous two models, Reem requires intervention that deal with sensorimotor skills, for example, fine motor skills and range of motion. The therapist should also focus on Reem's psychosocial deficits that limit her performance to play and interact with others, by limiting barriers that prevent her from fulfilling her needs and family's expectations. Similar intervention techniques that have been addressed above may be employed in this model to work on sensorimotor and psychosocial limitations Most importantly, the therapist needs to help Reem establish or reestablish a lifestyle configuration of activities that will lead to quality of life and satisfaction. Additionally, environment is a key that should be used in the intervention to enhance Reem's quality of living.

Similarities of the models

The most noticeable similarity among the three models, Occupational Adaptation (OA), Ecology of Human Performance (EHP), and Lifestyle Performance Model (LPM), is that the focus of assessment and intervention of these models is occupation-based. Occupational Adaptation stresses on occupations, for example, through using the term occupation throughout the model such as occupational role, occupational challenge, occupational response, and occupational environment. There is emphasis in the EHP model that performance is determined by the transaction between person and context, and that transaction occurs through engagement in tasks, occupations (2). Lifestyle Performance Model provides a framework that focuses on the domains of living, discussed above, that represents occupations. Additionally, environment is always a key role in these models with different focuses.

Dealing with the person's deficits and disabilities are essential across the models, particularly when these dysfunctions create limitations to the person's performance. In Occupational Adaptation, occupational

readiness is interventions that are designed to address the Reem's deficits that interfere with her occupational roles (5). Ecology of Human Performance provides an intervention strategy called 'restore' that aims to restore Reem's skills that have been lost due to her dysfunction (1). Lifestyle Performance Model gives some attention to remediation because Reem's deficits interfere with the pursuit of a healthy lifestyle (3).

Differences among the models

The main variation between the three perspectives, OA, EHP, and LPM, is the assumptions underlying each models, which make the focus of each one unique and different. Using Occupational Adaptation, the therapist evaluates and intervenes to promote Reem's internal adaptive capacity that will lead to enhanced occupational performance through maximizing her participation in occupations, i.e. play and social interaction. Therefore, the intervention does not involve specific techniques to enhance performance, but rather it is a way of thinking to increase adaptive capacity (5). However, Ecology of Human Performance emphasizes the importance role of Reem's context in performing her occupations (2). Contexts surrounding Reem have great potential to help the therapist increase Reem's performance range. Lifestyle Performance Model has a different focus which is on Reem's strengths and abilities to understand her activities that add to her quality of life and promote her lifestyle (3).

Conclusion

Occupational Adaptation and Ecology of Human Performance are the most appropriate models to be used with Reem. Occupational Adaptation will help Reem transfer what she has learned in occupational therapy sessions into other real-life situations, while Ecology of Human Performance can enhance her occupational performance through utilizing her contexts.

In my opinion, Occupational Adaptation should be used or supervised by an experienced occupational therapist since this model requires critical thinking about the client and how his/her internal adaptiveness changes. However, junior occupational therapists or even students may directly apply EHP into practice because it is characterized by simplicity and straightforwardness.

Self-Reflection

Conducting this assignment made me realize that what I had been practicing was not occupation-based. My practice was greatly influenced by the medical model, thus I was carrying out biomechanical techniques with Reem's case. The assessment was not complete, missing two important elements of performance, environment and occupation. These models of practice would have guided me to properly assess and intervene so that Reem would have benefited the most from occupational therapy.

References

1. Dunn, W., Brown, C. & McGuigan, A. (1994). The Ecology of Human Performance: A Framework for Considering the Effect of Context. *American Journal of Occupational Therapy, 48*: 595-607.
2. Dunn, W., Brown, C. & McGuigan, A. (2003). Ecological model of occupation. In Kramer, P., Hinojosa, J., & Royeen, C. B. Perspectives in Human Occupation: Participation in Life. Baltimore, Maryland: Lippincott Williams & Wilkins. (pp. 222-263).
3. Fidler, G. S. (1996). Lifestyle Performance: from profile to conceptual model. *American Journal of Occupational Therapy, 50:* 139-147.
4. Schkade, J., & Schultz, S. (1992). Occupational adaptation: Toward a holistic approach for contemporary practice, Part I. *American Journal of Occupational Therapy, 46*, 829-837.
5. Schkade, J., & Schultz, S. (2003). Occupational adaptation. In Kramer, P., Hinojosa, J., & Royeen, C. B. Perspectives in Human Occupation: Participation in Life. Baltimore, Maryland: Lippincott Williams & Wilkins. (pp. 181-221)
6. Schultz, S., & Schkade, J. (1992). Occupational adaptation: toward a holistic approach for contemporary practice, part 2. *American Journal of Occupational Therapy, 46*: 917-925.